

TAPR Regional Networking Special Interest Group Archive, January 1996 through December 1997

January 1996 through December 1997

TAPR's forum for amateur packet-radio networking, including regional network case studies, interconnection of regional networks, packet-to-Internet gateways, network planning, addressing, routing, and operational experience.

This volume contains 23 original monthly files and 866 messages, arranged chronologically. The PDF is a readable access copy: MIME transfer encodings are decoded, HTML bodies are converted to plain text, and non-text attachments are represented by descriptive notes. The raw source text is supplied separately with the Internet Archive item.

Month	Messages	Original source file
1996-01	26	netsig.9601
1996-02	38	netsig.9602
1996-03	20	netsig.9603
1996-04	65	netsig.9604
1996-06	32	netsig.9606
1996-07	24	netsig.9607
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1996-11	30	netsig.9611
1996-12	74	netsig.9612
1997-01	56	netsig.9701
1997-02	21	netsig.9702
1997-03	42	netsig.9703
1997-04	32	netsig.9704
1997-05	31	netsig.9705
1997-06	94	netsig.9706
1997-07	12	netsig.9707
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1997-09	32	netsig.9709
1997-10	23	netsig.9710
1997-11	4	netsig.9711
1997-12	11	netsig.9712

January 1996

Original source file: netsig.9601

Source: http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.9601

1. Maxar TXD

From: Dave Ewaldz N9HKM <dewaldz@sinnfree.sinnfree.org>
Date: Mon, 1 Jan 1996 21:22:43 -0600 (CST)
To: nos-bbs@hydra.carleton.ca
Cc: netsig@tapr.org
Message-ID: <Pine.LNX.3.91.960101211245.6196A-100000@sinnfree.sinnfree.org>
Rendered body type: text/plain

Several of you asked a while ago what txds modified Motorola Maxars can run. Well, I did some playing on the 9k6 link here over the holiday and determined what the lowest txd the Moxy/Maxars here can run reliably. A txd of 5 (50msec) is the lowest they would go while still running 100%. This was definitely not a scientific test, just incrementally dropping txd and sending unproto packets until losses started to occur, then backing up a notch. This might be able to be improved by nailing the rx high at all times, but I have not looked into this yet. Hope this info is useful to those considering moding Maxar/Moxies/Flexars for 9k6.

73

--

Dave Ewaldz N9HKM
dewaldz@sinnfree.sinnfree.org
dme@ingersoll.com

2. RE: [NETSIG:2302] Maxar TXD

From: Ron Curry <recurry@insighttec.com>
Date: Mon, 1 Jan 1996 22:35:49 -0800
To: "netsig@tapr.org" <netsig@tapr.org>
Message-ID: <01BAD899.80C37900@yankee.insighttec.com>
Rendered body type: text/plain

Thought I'd share some of my experiences and observations on TXD settings:

The problem trying to specify a TXD figure of merit for any transmitter is that it is dependent on several factors in addition to the TX/RX turn around time of the transmitter. TXD differs from TNC to TNC but more importantly TXD also has to do with the receiver at the other end. In a 9600 link one doesn't have squelch to contend with as do 1200 users (it seems common to run closed squelch voice radios there which makes for longer TXD than necessary) but the ability of the radio, modem, and TNC to recognize a carrier and a valid data stream (DCD on 9600 means real data recognized) plays a role as well. I've had two TEKK KS900 data radios with KPC9612's running at 10ms very reliably but with a TEKK talking to a Kenwood TM733 I had to lengthen TXD on the TEKK to 30ms. I've also found that less robust links (RF wise) tend to need longer TXD's.

Ron Curry KE6WED

From: Dave Ewaldz N9HKM[SMTP:dewaldz@sinnfree.sinnfree.org]
Sent: Monday, January 01, 1996 1:48 PM
To: netsig@tapr.org
Subject: [NETSIG:2302] Maxar TXD

Several of you asked a while ago what txds modified Motorola Maxars can run. Well, I did some playing on the 9k6 link here over the holiday and determined what the lowest txd the Moxy/Maxars here can run reliably. A txd of 5 (50msec) is the lowest they would go while still running 100%. This was definitely not a scientific test, just incrementally dropping txd and sending unproto packets until losses started to occur, then backing up a notch. This might be able to be improved by nailing the rx high at all times, but I have not looked into this yet. Hope this info is useful to those considering moding Maxar/Moxies/Flexars for 9k6.

73

--

Dave Ewaldz N9HKM
dewaldz@sinnfree.sinnfree.org
dme@ingersoll.com

3. Re: [NETSIG:2300] Re: X1J Nodes

From: Marvin Munster x5388 <mmunster@qualcomm.com>
Date: Tue, 02 Jan 1996 10:49:55 -0800
To: netsig@tapr.org
Message-ID: <199601021850.KAA22198@illyana.qualcomm.com>
Rendered body type: text/plain

Sean, I am about to update a local node here in San Diego to the X1J/4 configuration. I for one would be interested in your findings and various parameter settings for your particular situation. I am sure that would interest quite a few here on the NETSIG.

I extend this invitation for parameter information from all who have had experience with X1J/4.

Thanks for everyone's input.

Marvin - WB6PKK

--Snip--

t 12:55 AM 12/30/95 -0600, you wrote:
>...but our packet group SOAPRA just finished updating all our backbone
nodestacks to X-1J4 from TheNet. We have noticed...

```
      .\ / \ .  
      | \ (o)(o) / |  
-----o000o-----oo-----o000o-----  
| Marvin J. Munster - WB6PKK |  
| WB6PKK @ KJ6VC.#SOCA.CA.US.NOAM |  
| mmunster@qualcomm.com |  
|                               0000. |  
|-----|  
      .0000 ( )  
      ( ) ) /  
      \ ( ( /  
      \_) \_)
```

4. Re: [NETSIG:2302] Maxar TXD

From: KS9K Paul Hellenberg <paulh@sparc5.truline.com>
Date: Tue, 2 Jan 1996 16:44:13 +0600
To: netsig@tapr.org
Message-ID: <9601022244.AA06512@truline.com>
Rendered body type: text/plain

Hi Dave

Really usefull Information thank you.

I may live under a Rock but can you give me some info????

Is there a UHF version??

What is the power??

How hard is the conversion?? Would you consider doing it for \$\$\$

Are there any good sources and Price ?????

73 & Thanks Paul

At 09:48 PM 1/1/96 -0600, you wrote:

>Several of you asked a while ago what txds modified Motorola Maxars can
>run. Well, I did some playing on the 9k6 link here over the holiday and
>determined what the lowest txd the Moxy/Maxars here can run reliably.
>A txd of 5 (50msec) is the lowest they would go while still running 100%.
>This was definitely not a scientific test, just incrementally dropping txd
>and sending unproto packets until losses started to occur, then backing up
>a notch. This might be able to be improved by nailing the rx high at all
>times, but I have not looked into this yet.
>Hope this info is useful to those considering moding Maxar/Moxies/Flexars
>for 9k6.
>
>73
>--
>Dave Ewaldz N9HKM
>dewaldz@sinnfree.sinnfree.org
>dme@ingersoll.com
>

>
>
>
KS9K Paul Hellenberg
Tru Line Lithograhing Inc.
Work 414 554 7300 -125
Fax 414 554 8217
Home 414 554 9170

5. Re: Maxar TXD

From: "Dave Ewaldz" <dme@ingersoll.com>
Date: Wed, 3 Jan 1996 09:30:55 -6000
To: netsig@tapr.org
Message-ID: <199601031533.JAA26074@s3130.ingersoll.com>
Rendered body type: text/plain

Ron Curry <recurry@insighttec.com> wrote:

> around time of the transmitter. TXD differs from TNC to TNC but more
> importantly TXD also has to do with the receiver at the other end. In a

Ron is correct on this. However, on my link both rigs are identical UHF Moxies, so theoretically the rx's are the same, & no other stations are on the freq., just a point to point link. Ideal eh?. So, the numbers I got should be ballpark for Maxar performance, highly dependant on the other stations.

KS9K Paul Hellenberg <paulh@sparc5.truline.com> wrote:

> can you give me some info????
>
> Is there a UHF version??

The rigs here are UHF Moxies, small mobile rigs of the Motorola Maxar family. They appear at hamfests in the midwest for anywhere between \$15 to \$100 bucks apiece. There are VHF and low band versions, but I have little experience with those.

> What is the power??

In the Moxies, there is a low power and a high power UHF version. The ones I have are the High Power versions. They tune up to 445.05mhz and can easily run 25watts. You can tell a high power version from the two large 12v power pins on the Molex plugs on the rear. The low power versions have all small pins.

> How hard is the conversion??

Easy. Ya just have to be careful.

> Would you consider doing it for \$\$\$

I have done a couple for local hams no charge recently, but dont have time as I have many irons in the fire right now, sorry. You can do the mods easily yourself though.

> Are there any good sources and Price ?????

I see you are in WI. Try MDM radio in the Chicago area.
708-848-4210.

> 73 & Thanks Paul
>

I'm working on cleaning up my notes on the Maxars, and will post a message here on the netsig when I'm done.

On another note, please dont rule out rigs like the Motorola Mitrek for 9k6. The Mitrek is a higher end radio than the Maxar, and may perform better at sites with more stray RF around. Many people have had great success with the Mitrek. If you are skittish on mods, and just want a home 9k6 rig, check out the Tekk radios or the Kantronics D4-10. For my situation, I got the Maxars real cheap, enjoy experimenting, and wanted more power than 10 watts for this particular link.

73 Dave
--
Dave Ewaldz
The Ingersoll Milling Machine Co.

Rockford, IL. USA
Ph : 815-987-6081
Fax: 815-987-6541

6. BPQ kiss roms?

From: "Rex H. Ishmael" <rishmael@texhoma.net>
Date: Wed, 3 Jan 1996 15:01:44 -0600
To: netsig@tapr.org
Message-ID: <199601032101.PAA18446@ion3.ionet.net>
Rendered body type: text/plain

At one time I thought I had seen kiss roms for the KPC4 and KAM that would allow them to work in the dropped kiss config? Was I seeing things? I can not find anything on this in any of my files... Looking for a way to use both on same com port? Any one know if this has been done?

=====
Rex Ishmael, Environmental Engineer, Halliburton Energy Services
E-Mail: rishmael@halnet.com (work)
E-Mail: rishamel@texhoma.net (home)
Amatuer Mail: WD0AJG@WD0AJG.#SCOK.OK.USA.NOAM
=====

7. Re: [NETSIG:2307] BPQ kiss roms?

From: "Karl F. Larsen" <k5di@acca.nmsu.edu>
Date: Thu, 4 Jan 1996 04:34:53 -0700
To: netsig@tapr.org
Message-ID: <199601041134.EAA26372@acca.nmsu.edu>
Rendered body type: text/plain

At 01:31 AM 1/4/96 -0600, you wrote:

>At one time I thought I had seen kiss roms for the KPC4 and KAM
>that would allow them to work in the dropped kiss config?

That must have been in deep sleep. The KAM uses a much larger e-prom and I have never seen anything from G8BPQ for that application. I suggest finding an old DRSI card or a new one from PacComm. The DRSI had a 300 baud modem kit for the type 1 board that works well. They remove the need for many comm ports.

>Was I seeing things? I can not find anything on this in any of
>my files... Looking for a way to use both on same com port?
>Any one know if this has been done?

=====
>Rex Ishmael, Environmental Engineer, Halliburton Energy Services
>E-Mail: rishmael@halnet.com (work)
>E-Mail: rishamel@texhoma.net (home)
>Amatuer Mail: WD0AJG@WD0AJG.#SCOK.OK.USA.NOAM
>=====

>
>

Karl F. Larsen ---- k5di@acca.nmsu.edu --- <http://rever.nmsu.edu/~k5di/> -->

8. Re: [NETSIG:2307] BPQ kiss roms?

From: hank_oredson@MENTORG.COM (Hank Oredson)
Date: Thu, 4 Jan 96 13:17:05 PST
To: netsig@tapr.org
Message-ID: <9601041317.ZM640@hanko>
Rendered body type: text/plain

On Jan 4, 1:31am, Rex H. Ishmael wrote:

> Subject: [NETSIG:2307] BPQ kiss roms?
> At one time I thought I had seen kiss roms for the KPC4 and KAM
> that would allow them to work in the dropped kiss config?
> Was I seeing things? I can not find anything on this in any of
> my files... Looking for a way to use both on same com port?
> Any one know if this has been done?

Kantronics has proms for both the tncs you mention that run multi-drop KISS, in all it's different flavors. There are also proms for the other Kantronics tncs as well.

Sorry, but I don't have the info on exactly how to obtain these proms here at the office. If you contact Kantronics, I'm certain they will be glad to tell you how to get what

you need.

... Hank

--

Hank Oredson @ Mentor Graphics Library Operations
Internet : hank_oredson@mentorg.com "Parts 'R Us!"
Amateur Radio: W0RLI@W0RLI.0R.USA.NOAM

9. NetSIG Summary, Fall, 1995

From: Steve Stroh <strohs@halcyon.com>
Date: Mon, 8 Jan 1996 23:27:58 -0800 (PST)
To: TAPR PSR Submissions <psr@tapr.org>,
 TAPR Networking SIG List <netsig@tapr.org>
Message-ID: <Pine.Ult.3.91.960108230210.28286A-100000@chinook.halcyon.com>
Rendered body type: text/plain

Bob:

I know this is probably too late to make it into PSR, and I'll not be the least bit upset if it doesn't. I promised to do it, and better late than...

Steve N8GNJ

NetSIG'ers- here's what I'll be writing about you in TAPR PSR, if I'm not too obscenely late submitting this.

----- cut -----

Fall 1995 was a busy time for the TAPR NetSIG Mailing List. There were 301 messages posted from September through December. Some of the highlights were:

- * A discussion was begun about incorporating TNC to TNC compression into the software of a typical TAPR TNC2 compatible TNC. The initial discussions were very promising, and it appeared that compression was very "doable", and some talented folks were interested in the project.
- * The breadth (sp?) of knowlege represented on NetSIG on the X1J and ROSE networking software is amazing, especially when an entire quarter's messages are viewed over the course of an hour. There is an absolute wealth of information residing in the TAPR Mailing List Archives.
- * The glimpses of the many potential futures of Amateur Radio Digital Networking are impressive- there is some very powerful talent "lurking" on NetSIG.
- * A new Packet Radio modem, called "the GMSK modem" that offers potential over-the-air speeds of up to 28.8 KBPS and is backward compatible with the G3RUH 9600/19.2KBPS modem was announced on NetSIG as well as other newgroups and mailing lists.
- * A discussion on conversion of land mobile radios for 9600 baud use. The overall favorite LMR for conversion to Amateur Digital 9600 baud appears to be the Motorola Mitrek family.
- * The general tone of the discussions on NetSIG indicated that it may be appropriate for TAPR to host a mailing list that parallels NetSIG for TCP/IP networking issues. Current Amateur Radio TCP/IP mailing lists are focused on using TCP/IP as a BBS, and Amateur Radio TCP/IP software development.
- * NetSIG's leadership was passed from John Ackermann AG9V to Steve Stroh N8GNJ in December.
- * NetSIG remains moderated for the time being but may well return to unmoderated status in the near future.
- * My special thanks to Tom Moulton W2VY for his always enlightening and unfailingly civil postings to NetSIG.

Steve Stroh N8GNJ

--

Steve Stroh N8GNJ strohs@halcyon.com

10. Re: [NETSIG:2310] NetSIG Summary, Fall, 1995

From: Jeffrey Austen <JRA1854@tntech.edu>
Date: Wed, 10 Jan 1996 19:00:22 -0600 (CST)
To: netsig@tapr.org
Message-ID: <01HZUTAW64DE9LW1Q4@tntech.edu>
Rendered body type: text/plain

> * A new Packet Radio modem, called "the GMSK modem" that offers potential
> over-the-air speeds of up to 28.8 KBPS and is backward compatible with the
> G3RUH 9600/19.2KBPS modem was announced on NetSIG as well as other
> newgroups and mailing lists.

This is misleading because the name, "the GMSK modem," and the modulation type, GMSK, are too similar. Including a statement such as the following would help clear up the confusion. "This modem uses GMSK (Gaussian Minimum Shift Keying) modulation which is similar to, and compatible with, the modulation used in current 9600 and 19200 b/s modems." It should also be noted that some amateur equipment, particularly anything using the MX-COM chips, already uses this form of modulation.

Jeff, k9ja

+-+

Jeffrey Austen		Tennessee Technological University
jra1854@tntech.edu		Box 5004
(615) 372-3485		Cookeville Tennessee 38505 U.S.A.

11. Re: [NETSIG:2296] X1J Nodes

From: Doug Fajardo <dfajardo@earthlink.net>
Date: Sat, 13 Jan 1996 23:15:03 -0800 (PST)
To: NETSIG <netsig@tapr.org>
Message-ID: <Pine.LNX.3.91.960113230352.407A-100000@timeheart.def.org>
Rendered body type: text/plain

On Thu, 28 Dec 1995, Bill Vodall wrote:

<stuff deleted...>

> But....

> But there is some

> weirdness with the original AX25 connections. It will hang for long
> quiet pauses. I've been in the middle of forwarding bulletins (AX25
> style, not IP) on a fairly clean circuit when the X1J node just goes
> and disconnects me.

I too have seen this problem. It isn't processor loading; I checked the "stats".

This may not be the same problem, but it has made me wonder about a possible protocol problem: The network is actually on CAP frequencies, located in Southern California, so loading at the time was minimal. The problem is reproducible. The "stats" command indicates that none of the X1JR4 nodes were heavily loaded.

All nodes are X1JR4, same configuration except for call signs, and same radio equipment on the hilltops. The connectivity looks like this (for discussion purposes I will refer to symbolic names, rather than actual signs).

```
ENTRY  - - - -  PATHA  - - - -  DEST
        | - -  PATHB  - - - - |
```

It is possible that ENTRY and DEST may hear each other, but it is definatly not at any usable signal strength.

I do an AX25 level 2 connect to ENTRY, and then "connect DEST". An external monitor shows that ENTRY routes through PATHA to reach DEST. it also shows that DEST uses PATHB to send responses back to ENTRY(and then to me).

All of the above is in accordance with the routing tables and normal; both routes are identical (quality 192), but the order of the route table is different, which accounts for the different choice.

The problem(?) is that the time to recieve a "routes" list, under these conditions, is measurable in minutes due to heavy collision/retry counts.

Each individual link is sound; If I do a connect ENTRY, then CONNECT

PATHA, then CONNECT DEST all is well, and response to a "ROUTES" command is measurable in seconds. Similarly, PATHB is also good.

It would seem that I have set up some kind of pathological situation here; can anyone explain why it happens?

Thanks,
*** Doug Fajardo
dfajardo@earthlink.com (Email)
WB6KNY (HAM Radio)
Eagle 249 (Civil Air Patrol)

12. Re: [NETSIG:2312] Re: X1J Nodes

From: "Karl F. Larsen" <k5di@acca.nmsu.edu>
Date: Sun, 14 Jan 1996 06:40:10 -0700 (MST)
To: Doug Fajardo <dfajardo@earthlink.net>
Cc: netsig@tapr.org
Message-ID: <Pine.SUN.3.91.960114063006.12061B-100000@acca>
Rendered body type: text/plain

On Sun, 14 Jan 1996, Doug Fajardo wrote:

```
>
>
> On Thu, 28 Dec 1995, Bill Vodall wrote:
>
> <stuff deleted...>
> > But....
> > But there is some
> > weirdness with the original AX25 connections. It will hang for long
> > quiet pauses. I've been in the middle of forwarding bulletins (AX25
> > style, not IP) on a fairly clean circuit when the X1J node just goes
> > and disconnects me.
>
> I too have seen this problem. It isn't processor loading; I
> checked the "stats".
>
> This may not be the same problem, but it has made me wonder about a
> possible protocol problem: The network is actually on CAP frequencies,
> located in Southern California, so loading at the time was minimal. The
> problem is reproducible. The "stats" command indicates that none of the
> X1JR4 nodes were heavily loaded.
>
> All nodes are X1JR4, same configuration except for call signs, and same
> radio equipment on the hilltops. The connectivity looks like this (for
> discussion purposes I will refer to symbolic names, rather than actual
> signs).
>
>
> ENTRY  - - - - - PATHA  - - - - - DEST
>         | - -   PATHB  - - - - -|
>
> It is possible that ENTRY and DEST may hear each other, but it is
> definatly not at any usable signal strength.
```

Stop right here. You have set up a classic problem that Netrom has not the smarts to cope with. What you say below is exactly like ANY Netrom style node will act.

You should understand that the X1J4 software is added to TheNet from Germany version 1.0 and a connect request via ax.25 to it is handled just like a Netrom node.

```
>
> I do an AX25 level 2 connect to ENTRY, and then "connect DEST".
> An external monitor shows that ENTRY routes through PATHA to reach DEST.
> it also shows that DEST uses PATHB to send responses back to ENTRY(and
> then to me).
>
> All of the above is in accordance with the routing tables and normal;
> both routes are identical (quality 192), but the order of the route table
> is different, which accounts for the different choice.
>
> The problem(?) is that the time to recieve a "routes" list, under these
> conditions, is measurable in minutes due to heavy collision/retry counts.
>
> Each individual link is sound; If I do a connect ENTRY, then CONNECT
```


> PATHA, then CONNECT DEST all is well, and response to a "ROUTES" command
> is measurable in seconds. Similarly, PATHB is also good.
>
> It would seem that I have set up some kind of pathological situation
> here; can anyone explain why it happens?
>
> Thanks,
> *** Doug Fajardo
> dfajardo@earthlink.com (Email)
> WB6KNY (HAM Radio)
> Eagle 249 (Civil Air Patrol)
>
>
Doug, your effort is fine, but you didn't prove that anything is
wrong with the X1J4 node. Put up plain nodes and check it again. You will
get about the same results.

To correct this problem you can, and should manually change the
routes so that all packets pass over the good path. That will make
everything work good.

73, karl k5di

13. Re: X1J Nodes (split paths)

From: shawnpat@sierra.net
Date: Sun, 14 Jan 1996 15:55:47 +0000
To: netsig@tapr.org
Message-ID: <199601150000.AA14563@diamond.sierra.net>
Rendered body type: text/plain

At 02:33 AM 1/14/96 -0600, Doug Fajardo <dfajardo@earthlink.net>
wrote:

> This may not be the same problem, but it has made me wonder about a
>possible protocol problem: The network is actually on CAP frequencies,
>located in Southern California, so loading at the time was minimal. The
>problem is reproducible. The "stats" command indicates that none of the
>X1JR4 nodes were heavily loaded.

(Note: CAP network is simplex in this case)

> All nodes are X1JR4, same configuration except for call signs, and same
>radio equipment on the hilltops. The connectivity looks like this (for
>discussion purposes I will refer to symbolic names, rather than actual
>signs).

```
>
>
>ENTRY - - - - ->  PATHA >- - - - - DEST
>  \----- -<  PATHB <- - - - -/      (edited)
>
```

> It is possible that ENTRY and DEST may hear each other, but it is
>definatly not at any usable signal strength.

Comment: It may not be useable, but unless your running the "open
squelch" option on the nodes (and even if you are) there is some
processor time taken up to decode and scrap the packets, as well as
the simple "some one else is talking, so I should wait" timing.
This is the hidden node problem of simplex nets. CAP National, Please?

>I do an AX25 level 2 connect to ENTRY, and then "connect DEST".
>An external monitor shows that ENTRY routes through PATHA to reach DEST.
>it also shows that DEST uses PATHB to send responses back to ENTRY(and
>then to me).

>
> All of the above is in accordance with the routing tables and normal;
>both routes are identical (quality 192), but the order of the route table
>is different, which accounts for the different choice.

>
> The problem(?) is that the time to recieve a "routes" list, under these
>conditions, is measurable in minutes due to heavy collision/retry counts.

Not to mention, what other hidden nodes, that PathB hears which makes
for enhanced problems.

> Each individual link is sound; If I do a connect ENTRY, then CONNECT
>PATHA, then CONNECT DEST all is well, and response to a "ROUTES" command
>is measurable in seconds. Similarly, PATHB is also good.

>
> It would seem that I have set up some kind of pathological situation

>here; can anyone explain why it happens?

Actually Doug, you said why (above). The paths on the routes list are the same, except that the order is different. The node chooses the first of the list to make it's path, *if* the path qualities are the same, *or* the return path (secondary) is better quality count than the original path. The obsolescence counter will also effect this.

Where this makes a bad circuit, is that the reply packets, ACKs and frame counters end up traveling the second path which results in logical confusion for the nodes of both paths. Besides the doubled traffic of the second path reducing the allotted time available, the logics of the processors have to keep adjusting the frame counters as each new packet goes through.

I first noticed this phenomenon 4 years ago, but didn't have the ability to ask someone about it then. I have seen it with TNP206, 208, 209, 210 as well as the TNX1 series. In my case I first noticed it on a path of unequal node hops. I think it was 3 or 4 nodes out and 5 or 6 nodes back. By doing a second connect and connecting to each node in the path, I was able to trace my first connect all the way through the loop. (See Users command on your TNC)

It has happened several times since then, and I have been able to sustain the link in a couple of cases for an hour or so. Some times the secondary path will collapse and the primary path will recover. Most often other traffic starts up and the secondary path drops, with the primary too confused to recover. Just prior to the secondary dropping, there will be a "push-me/pull-you" effect, where the ack arrives late, after my tnc has resent the packet, then the thrashing starts as the destination gets confused and sends replies/acks with advanced or retarded frame counts.

A fix would be for the node op to "lock in" the quality for the primary path (pick one if both are excellent) and make it just a point or two higher than the other. This should be done after carefull monitoring to ensure that the path is actually excellent (or adequate).

Another fix would be with the node ware designer, to code for using the reply-to node to allways be the same as the sent-from. But this might be easier said than done and have effects on other portions of the dynamic path scheme.

Thanks Doug, for bringing this topic out.

73 de Shawn, N7XBM, NV0412

>*** Doug Fajardo
> dfajardo@earthlink.com (Email)
> WB6KNY (HAM Radio)
> Eagle 249 (Civil Air Patrol)

14. Re: X1J Nodes

From: Doug Fajardo <dfajardo@earthlink.net>
Date: Thu, 18 Jan 1996 16:14:51 -0800 (PST)
To: NETSIG <netsig@tapr.org>
Message-ID: <Pine.LNX.3.91.960118155711.266E-100000@timeheart.def.org>
Rendered body type: text/plain

Thanks Karl and Shawn for replying to my previous post.

Both of you suggested changeing the routing table to eliminate the double path; this is a viable work-around in at least some cases.

Karl, I do understand (and accept as normal), the fact of the sepearte return path; this is a classic textbook example of how datagram routing differes from stream routing.

However, I am still unclear as to why the multiple collisions occur, since this situation should be considered normal in a datagram network such as X1J.

I am not sure if it is even an X1J problem, or a problem in the current ax25 channel access scheme, or???.

The documentation for the MFJ 1270C TNC talks about a "priority channel access" heuristic whereby RR packets(ie: level 2 ack's) take the first "slot" time regardless of channel activity. Is this type of heuristic also in the X1JR4 code, and if so could it account for the collisions?

For those who came late into the discussion, here is the basic setup (X1JR4 nodes, all hilltop equipment and programming identical. All indicated paths are good VHF 1200 baud links):

```
ENTRY - - - PATHA - - - DEST
      | - - PATHB - - |
```

Connect to ENTRY (via level 2), then issue "connect DEST". ENTRY uses PATHA to reach DEST. Due to a difference in the order of the routing table in DEST, the responses from DEST to ENTRY use PATHB. A "route" or "node" command (or anything else requesting data from the DEST node) is issued. Large number of collisions and retries are detected,

*** Doug Fajardo
dfajardo@earthlink.com (Email)
WB6KNY (HAM Radio)
Eagle 249 (Civil Air Patrol)

15. Giving NOSVIEW a shot

From: NewsomJ%62SVS.MCCHORD@mhs-gw.mcchord.af.mil (Newsome, SSgt John M)
Date: 19 Jan 96 09:35:52 PST
To: netsig%tapr.org@mhs-gw.mcchord.af.mil
Message-ID: <D2D1FF30018C2F79@-SMF->
Rendered body type: text/plain

Just found the NOSVIEW software and looking at the possibility of adding it to my BBS. Would like to hear comments about problems or tricks in setting it up. Have the NOSintro book and using it to help in the setup.

Have been working with Novell 4.1 Networking for about a year. So that part has helped alot.

Please E-Mail your Comments

John

KB8MAU

AFA5JN MARS Call also Installation MARS Director for McChord AFB in Washington

16. JNOS Auto FTP

From: Steve Sampson <ssampson@icon.net>
Date: Fri, 19 Jan 1996 11:32:02 -0600
Cc: netsig@tapr.org
Message-ID: <30FFD592.5CD3@icon.net>
Rendered body type: text/plain

Here's a little (well, delete the comments! ha) batch file to save the last three weather data downloads. Note, substitute any file you wish to download or keep several older versions of.

73, Steve N5OWK

```
@echo off
rem
rem MESO.BAT
rem
rem This program is designed to be run by KICKOFF.EXE, or AT.EXE
rem
rem It facilitates keeping the last three MESO data files. JNOS 1.10m
rem can perform an AT command every 40 minutes past the hour like so:
rem
rem     at 40 "ftp n0els.ampr.org meso+"
rem
rem The meso file reads like so:
rem
rem     type ascii
rem     get /wxreport/ctr ctr.new
rem     quit
rem
rem Make sure you have a NET.RC entry for your ftp target:
rem
rem     n0els.ampr.org n5owk steve
rem
```

```

rem The kickoff program (or any DOS/Windows AT command) then
rem should execute this file. This file is run every 15 minutes, as
rem sometimes the FTP takes longer than normal on a busy network.
rem
rem This program checks to see if the new file exists. If it does not,
rem the program exits without change. If it does, then the previous two
rem downloads are saved. The copy command was used, as it is safer than
rem the move command over a network (although no network is used yet).
rem
rem KICKOFF.EXE was distributed with Wordperfect 6.0. It is the best
rem Windows AT command I've found. Most others eat CPU like crazy.
rem
rem The MESO data is a weather snapshot from the University of Oklahoma
rem which is based on remote sensors throughout the state.
rem
rem This program is Public Domain (p) 1996, No Rights Reserved, N50WK
rem
if not exist c:\jnos\ctr.new goto :skipit
fc c:\jnos\ctr.new c:\jnos\public\ctr | if ERRORLEVEL 0 goto :dontchange
copy /v /y c:\jnos\public\ctr.2 c:\jnos\public\ctr.3 >NUL
copy /v /y c:\jnos\public\ctr.1 c:\jnos\public\ctr.2 >NUL
copy /v /y c:\jnos\public\ctr c:\jnos\public\ctr.1 >NUL
copy /v /y c:\jnos\ctr.new c:\jnos\public\ctr >NUL
:dontchange
del c:\jnos\ctr.new >NUL
:skipit
exit

--
Steve Sampson, N50WK
ssampson@icon.net

```

17. s

From: n1nfc@ampr.america.com
 Date: Sun, 20 Aug 95 12:47:53 UTC
 To: netsig@tapr.org
 Message-ID: <3732@ampr.america.com>
 Rendered body type: text/plain
 subscribe

18. Re: [NETSIG:2316] Giving NOSVIEW a shot

From: "Bob Nielsen" <nielsen@primenet.com>
 Date: Mon, 22 Jan 1996 03:34:35 +0700
 To: NewsomJ%62SVS.MCCHORD@mhs-gw.mcchord.af.mil (Newsome, SSgt John M),
 netsig@tapr.org
 Message-ID: <199601221034.DAA21460@usr4.primenet.com>
 Rendered body type: text/plain
 NewsomJ%62SVS.MCCHORD@mhs-gw.mcchord.af.mil (Newsome, SSgt John M)
 wrote:

> Just found the NOSVIEW software and looking at the possibility of adding
 > it to my BBS. Would like to hear comments about problems or tricks in
 > setting it up. Have the NOSintro book and using it to help in the setup.
 >
 >
 > Have been working with Novell 4.1 Networking for about a year. So that
 > part has helped alot.
 >
 > Please E-Mail your Comments

John, at the risk of getting into a religious war, I would recommend
 that you use either JNOS (available from pc.usl.edu or ftp.tapr.org)
 or TNOS (available from ftp.lantz.com) instead of NOSVIEW. NOSVIEW
 is based on a fairly old port of KA9Q NOS, while the others have
 numerous improvements, notably much better handling of memory. The
 NOSIntro book is still highly applicable, although you will need to
 study the documentation available for the newer program to figure out
 the differences.

73, Bob

Bob Nielsen
 Tucson, AZ

Internet:nielsen@primenet.com
 AMPRnet: w6swe@w6swe.ampr.org
 AX.25: w6swe@wb7tts.az.usa.noam

19. Re: [NETSIG:2318] s

From: "Tom Moulton" <tmoulton@ram.net>
Date: Wed, 24 Jan 96 11:09:52 EST
To: netsig@tapr.org
Message-ID: <15021573.2234@ram.net>
Rendered body type: text/plain
>From: n1nfc@ampr.america.com
>Subject: [NETSIG:2318] s
>Date: Wed, 24 Jan 1996 08:20:49 -0600 (CST)
>Reply-To: netsig@tapr.org
>Sender: netsig@tapr.org
>To: netsig@tapr.org
>
>subscribe

the address is Listserv@tapr.org

they have many lists there... netsig bbssig aprssig etc

interested in NOS? there is TNOS (list at listserv@lantz.com)

tcp-group@ucsd.edu (listserv@ucsd.edu)

Thomas A. Moulton, W2VY
w2vy@ram.net

20. Re: [NETSIG:2320] Re: s

From: NewsomJ%62SVS.MCCHORD@mhs-gw.mcchord.af.mil (Newsome, SSgt John M)
Date: 25 Jan 96 06:29:31 PST
To: netsig@tapr.org@mhs-gw.mcchord.af.mil
Message-ID: <12930731018C2F79@-SMF->
Rendered body type: text/plain

Thanks Tom,

Currently I have been working with NOSview Software. Everything that I am working with is dos. Any suggestions???

John KB8MAU

21. High speed microwave link ?

From: ferracci@imaginet.fr (Laurent Ferracci - F1JKJ)
Date: Thu, 25 Jan 1996 17:46:17 GMT
To: netsig@tapr.org
Message-ID: <3107b7cf.6159289@mail.imagnet.fr>
Rendered body type: text/plain

Hi there.

I am looking for info about various high speed (x KBps) microwave solutions.

I've just read (once more) an article from N6GN in "Packet, speed more speed.." and i've also downloaded a few explanations from the author's web page, but i just can't figure out HOW the system is interfaced to the computer, and what is required on the computer.

So i am asking this simple question: Has anyone build and used a system like this ? Where can i get a complete info about a similar system (using gunn diode on 10Ghz) ? What is the simplest solution ?

```
-- +-----+-----+-----+
-- | From Laurent FERRACCI, F1JKJ | > ferracci@imaginet.fr < |
-- | Montpellier, FRANCE | http://www.imagnet.fr/~ferracci |
-- +-----+-----+-----+
--
-- [ PGP key on public-key servers ]
```

22. NOSview

From: NewsomJ%62SVS.MCCHORD@mhs-gw.mcchord.af.mil (Newsome, SSgt John M)
Date: 28 Jan 96 12:22:01 PST
To: netsig@tapr.org@mhs-gw.mcchord.af.mil
Message-ID: <85680B31018C2F79@-SMF->
Rendered body type: text/plain

Ok what I have is a 386 DX 40 with 8Mb Ram and a 120 Mb HDD. According to the books and I mean books this should be plenty. Is there anyone that is using NOSview that has it running. So far all that I have read from you guys is that TNOS is the way to go. Well I spent the greater part of 2 days downloading this and it is a lot harder to set up than NOSview. I will be using a Codex 2173 modem hooked via telephone line to an internet concentrator. So far I have been having trouble setting up the server. I cannot get the server to recognize the IP address.

Comments please

JOHN KB8MAU

23. Re: [NETSIG:2323] NOSview

From: "Karl F. Larsen" <k5di@acca.nmsu.edu>
Date: Mon, 29 Jan 1996 04:59:50 -0700
To: netsig@tapr.org
Message-ID: <199601291159.EAA08786@acca.nmsu.edu>
Rendered body type: text/plain

At 01:51 AM 1/29/96 -0600, you wrote:
>Ok what I have is a 386 DX 40 with 8Mb Ram and a 120 Mb HDD. According
>to the books and I mean books this should be plenty. Is there anyone
>that is using NOSview that has it running. So far all that I have read
>from you guys is that TNOS is the way to go. Well I spent the greater
>part of 2 days downloading this and it is a lot harder to set up than
>NOSview. I will be using a Codex 2173 modem hooked via telephone line to
>an internet concentrator. So far I have been having trouble setting up
>the server. I cannot get the server to recognize the IP address.
>
>Comments please
>
>
>
>JOHN KB8MAU

Hi SSg John, I think your attempting to byte off more than you should in one week...I have been running JNOS for 3 years and am STILL learning. Nosview has some nice Batch files that set up your computer so it CAN work. But in my opinion you will be much better off with JNOS if you stay with a DOS computer or, TNOS if you want to run it from Linux.

FTP to ftp.ucsd.edu and cd to the hamradio/packet/tcpip/incoming directory and download the files that are like jnoscmd6.zip and jnosdoc.zip and jnos110m.exe which is the latest version. Also look at the TNOS there.

Print out all the good stuff and start playing. It will be hard the first few weeks but it gets better...:-)

Karl F. Larsen ---- k5di@acca.nmsu.edu --- <http://rever.nmsu.edu/~k5di/> -->

24. Re: [NETSIG:2323] NOSview

From: ssampson@icon.net (S. Sampson)
Date: Mon, 29 Jan 1996 07:30:17 GMT
To: netsig@tapr.org
Message-ID: <199601290730.HAA02856@ns2.icon.net>
Rendered body type: text/plain

>So far all that I have read from you guys is that TNOS is the way to go.
>Well I spent the greater part of 2 days downloading this and it is a lot
>harder to set up than NOSview.
>I will be using a Codex 2173 modem hooked via telephone line to
>an internet concentrator.
>So far I have been having trouble setting up the server. I cannot get the
>server to recognize the IP address.

I must comment here. The later NOS stuff is the earlier NOS stuff, with a whole lot of BBS thrown in. TNOS is a BBS first, and a NOS second. Rather than 2 separate programs, it's combined. JNOS is headed that way also. Karns NOS doesn't have much of a BBS in it, but no one uses it for debugging anymore (they just take his newer ideas and add it to JNOS. JNOS is the version that is debugged the best. There are many people on that project. What's more, the defaults are better set, so that your autoexec can be 5 lines long, instead of the 80 lines of most other versions (to tame the defaults).

Neither NOS is optimized for wireline service. If you want to hook up to

a telco, then I'd suggest you just get Linux. If you want to hook up to a radio, I suggest you get JNOS. I wouldn't use either on the other (radio vs modem).

FWIW

Steve

25. FCC Action on 219-220 MHz

From: dewayne@warpspeed.com (Dewayne Hendricks)
Date: Mon, 29 Jan 1996 08:33:48 -0800
To: fccreg@tapr.org (TAPR FCC Regulatory List),
pcs@tapr.org (TAPR PCS Mailing List),
netsig@tapr.org (TAPR Networking List)
Message-ID: <v02140b1bad32a66140a7@[192.160.122.15]>
Rendered body type: text/plain

FCC AFFIRMS SECONDARY ALLOCATION OF THE
219-220 MHZ BAND FOR USE BY THE AMATEUR
RADIO SERVICE -- ET Docket 93-40 (Report No. DC 96-
5, Action in Docket Case)

The FCC affirmed the secondary allocation of the
219-220 MHz band for use by the Amateur Radio Service,
granting in part and denying in part a Petition for
Reconsideration filed by Orion Telecom (Orion), a licensee

in the Automated Maritime Telecommunications Systems
(AMTS).

Action by the Commission January 25, 1996, by
MO&O (FCC 96-25).

News Media contact: Kara Palamaras at (202) 418-
0500. Office of Engineering and Technology contact: Tom
Derenge at (202) 418-2451. [Internet file name: nret6001.txt]

--

~~~~~  
Dewayne Hendricks, WA8DZP ! CIS: 75210,10 AppleLink: D6547  
Warp Speed Imagineering ! Internet: dewayne@warpspeed.com  
43730 Vista Del Mar ! Packet Radio: WA8DZP @ K3MC.#NOCAL.CA.USA.NOAM  
Fremont, CA 94539-3204 ! AOL: HENDRICKS  
Fax: (510) 770-9854 ! WWW: http://www.warpspeed.com/  
~~~~~

26. More on FCC 219-220 MHz Action

From: dewayne@warpspeed.com (Dewayne Hendricks)
Date: Mon, 29 Jan 1996 08:40:42 -0800
To: fccreg@tapr.org (TAPR FCC Regulatory List),
pcs@tapr.org (TAPR PCS Mailing List),
netsig@tapr.org (TAPR Networking List),
tcp-group@UCSD.EDU (UCSD TCP/IP Networking List)
Message-ID: <v02140b1cad32a852b589@[192.160.122.15]>
Rendered body type: text/plain

NEWSReport No. DC 96-5 ACTION IN DOCKET CASE January 29, 1996

FCC AFFIRMS SECONDARY ALLOCATION OF THE 219-220 MHZ
BAND FOR USE BY THE AMATEUR RADIO SERVICE
(ET DOCKET 93-40)

The FCC affirmed the secondary allocation of the 219-220 MHz band for use
by the Amateur Radio Service, granting in part and denying in part a
Petition for Reconsideration filed by Orion Telecom (Orion), a licensee in
the Automated Maritime Telecommunications Systems (AMTS).

Orion argued that the FCC should rescind its decision to allocate the
219-220 MHz band to the amateur radio service because the 80 km exclusion
distance between AMTS and amateur operations is insufficient to protect
primary AMTS operations from harmful amateur interference. Orion asserted
that a 925 km (575 mile) exclusion distance is necessary to protect AMTS
operations. Orion further asserted that such an exclusion distance would
render the 219-220 MHz band unusable for the Amateur Radio Service because
this exclusion distance around every AMTS operation would effectively
exclude amateur operations from urban areas where they are predominantly
concentrated. Orion also stated that in the event we do not rescind the
allocation, we should amend our rules to provide better protection for AMTS
operations.

Orion specifically requested the Commission to:

- 1) modify the rules specifically to protect AMTS remote receivers;
- 2) require all amateur operations in the 219-220 MHz band to use interference avoidance techniques;
- 3) amend the rules to correspond specifically with the text of the R&O concerning the immediate resolution of any interference by amateurs to AMTS licensees;
- 4) require type acceptance of all amateur equipment used in the 219-220 MHz band;
- 5) require the amateur notification provided AMTS licensees to include the technical specifics of the proposed amateur operation; and
- 6) require that the maximum permissible power of amateur operations in the 219-220 MHz band be limited according to the percentage of the channel over which the signal is spread to prevent high powered narrowband signals.

The FCC denied the above requests. Nevertheless, the FCC took note of Orion's expressed concern that the amateur rules do not adequately specify the frequency range of AMTS operations and, thus, database searches conducted by amateurs could miss some AMTS coast stations. Accordingly, the FCC amended the rules to indicate that AMTS operations specifically use the 217-218 MHz and 219-220 MHz bands.

Action by the Commission January 25, 1996, by MO&O (FCC 96-25). Chairman Hundt, Commissioners Quello, Barrett, Ness and Chong, with Commissioner Quello issuing a statement.

- FCC -

News Media contact: Kara Palamaras at (202) 418-0500. Office of Engineering and Technology contact: Tom Derenge at (202) 418-2451.

--

~~~~~  
Dewayne Hendricks, WA8DZP ! CIS: 75210,10 AppleLink: D6547  
Warp Speed Imagineering ! Internet: dewayne@warpspeed.com  
43730 Vista Del Mar ! Packet Radio: WA8DZP @ K3MC.#NOCAL.CA.USA.NOAM  
Fremont, CA 94539-3204 ! AOL: HENDRICKS  
Fax: (510) 770-9854 ! WWW: http://www.warpspeed.com/  
~~~~~

February 1996

Original source file: netsig.9602

Source: http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.9602

1. RE: [NETSIG:1916] Re: Definition of a "network"

From: "Ackermann, John" <ackerj@lawdept.daytonoh.ATTGIS.COM>
Date: Wed Aug 23 13:07 EDT 1995
To: netsig <netsig@tapr.org>
Message-ID: <303B62E0@prowler.daytonoh.attgis.com>
Rendered body type: text/plain

Hi Karl --

I'm trying really hard to explain the routing principles. I've answered my definition question by talking about a local area network being (usually) analogous to an IP subnet.

Thanks for the comments...

John

```
-----
>From: netsig
>To: netsig
>Subject: [NETSIG:1916] Re: Definition of a "network"
>Date: Wednesday, August 23, 1995 10:13AM
>
>
>      Hi John, I was the first I think to write a many message paper
>      titled "The Wonderful PBBS Network". In it I showed that the pbbs network
>      works further than a AX.25 node system can do.
>
>      As for what is a network in terms of tcp/ip I own 2 X1J nodes and
>      define a network as 2 or more tcp/ip stations connected by an IP router.
>      In truth ANY NOS station can be an IP router, but 2 hams connected to
>      each other a network it is not. A network can be improved by using
>      subnets and I have found that subnets are poorly understood by
>      professionals in the internet world.
>
>      I hope your new book will dwell on the subnet idea and explain it
>      well since the IP number gurus want to set things up as subnets. I know
>      understand how it works and how to set my 2 routers to use them.
>
>-karl k5di
>
>
>
>
>On Fri, 18 Aug 1995 jra@ag9v.ampr.org wrote:
>
>> I (jra@ag9v.ampr.org) wrote:
>> >
>> >I'm trying to describe what a "network" is for my NOS book, and need
>> >input from
>> >those more knowledgeable about the formal definitions than I.
>> >
>> >If it wasn't clear from my message, I'm not asking whether the BBS store-
>> >and-forward system is a network. I'm talking only about whether, within
>> >the class of IP networks, all stations on a single net must be fully
>> >connected.
>> >
>> >Just wanted to clear things up and not ignite another religious war.
>> >
>> John
>>
>> --
>> John Ackermann AG9V
>> Internet: jra@ag9v.ampr.org
>> Packet: AG9V@N8ACV.#DAY.OH.USA
>>
>
```

2. Re: [NETSIG:2324] Re: NOSview

From: NewsomJ%62SVS.MCCHORD@mhs-gw.mcchord.af.mil (Newsome, SSgt John M)
Date: 29 Jan 96 10:19:26 PST
To: netsig@tapr.org@mhs-gw.mcchord.af.mil
Message-ID: <320E0D31018C2F79@-SMF->

Rendered body type: text/plain

Will it work with a comtrex 2173 modem hooked to an internet concentrator

John

3. Re: [NETSIG:2324] Re: NOSview

From: Bob Merritt <bobm@mindspring.com>
Date: Tue, 30 Jan 1996 08:20:48 -0500
To: netsig@tapr.org
Message-ID: <199601301323.IAA29172@borg.mindspring.com>
Rendered body type: text/plain

> Hi Ssg John, I think your attempting to byte off more than you
> should in one week...I have been running JNOS for 3 years and am STILL
> learning. Nosview has some nice Batch files that set up your computer so it
> CAN work. But in my opinion you will be much better off with JNOS if you
> stay with a DOS computer or, TNOS if you want to run it from Linux.

I agree John.... I've been using JNOS for over 4 years and still make "dumb" mistakes. Its a constant and ever evolving learning process... Start with JNOS, skip the NOSview...

See my web pages for the JNOS ftp site.. and other goodies... Now that I think about it, I should put a sample working autoexec.nos file on the web pages!

<http://www.mindspring.com/~bobm>

73/Bob ka4byp

4. Re: [NETSIG:2328] Re: Definition of a "network"

From: NewsomJ%62SVS.MCCHORD@mhs-gw.mcchord.af.mil (Newsome, SSgt John M)
Date: 02 Feb 96 13:17:26 PST
To: netsig@tapr.org@mhs-gw.mcchord.af.mil
Message-ID: <477D1231018C2F79@-SMF->
Rendered body type: text/plain

John

The defination of a network is:

A group of computers that can communicate with each other, share resources (hard drives or printers), and access remote hosts.

That is straight from my Novell Netware 4.1 System Administration Book.

John KB8MAU

5. Re: [NETSIG:2331] Re: Definition of a "network"

From: Tim Hayes <thayes@hardees.Rutgers.EDU>
Date: Tue, 6 Feb 1996 15:36:16 -0500
To: netsig@tapr.org
Message-ID: <199602062036.PAA09099@copernicus.rutgers.edu>
Rendered body type: text/plain

> The defination of a network is:

>

> A group of computers that can communicate with each other, share
> resources (hard drives or printers), and access remote hosts.

Ak! I don't like that one. Just because *devices* are on a network together does not mean they can do anything other than modulate electrons or photons with information in a way that the other devices on the same network can probably demodulate...

Anything else implies that the devices could make use of the demodulated information. If I have a netware server and a NFS workstation on a network it is unlikely that they can communicate, or share resources just because they both talk IEEE 802.*.

> That is straight from my Novell Netware 4.1 System Administration Book.

;))

Concise Oxford Dictionary, 8th Ed., Copyright 1991 Oxford Univ. Press

/network/ <<"netw3:k"> n. & v.

n.

4. a chain of interconnected computers, machines, or operations.

6. Re: [NETSIG:2332] Re: Definition of a "network"

From: "Tom Moulton" <tmoulton@ram.net>

Date: Wed, 07 Feb 96 00:20:58 EST

To: netsig@tapr.org

Message-ID: <15021573.2297@ram.net>

Rendered body type: text/plain

>> A group of computers that can communicate with each other, share
>> resources (hard drives or printers), and access remote hosts.

I don't know if Sprint agrees, both their Phone network and their X.25
networks provide communications without sharing any other resource
other than bandwidth.

The OSI model has the Network layer which is responsible for passing
the data Edge to Edge, sharing Disks, Printers, etc requires a transport
layer of some sort...

This is such a vague term that to get a real definition you also need
to specify a context.

(Another Network *IS* the NTS where stations pass data edge to edge and they
even have an internal transport protocol...)

Thomas A. Moulton, W2VY

w2vy@ram.net

7. Re: [NETSIG:2331] Re: Definition of a "network"

From: Robert Donnell <rdonnell@eskimo.com>

Date: Wed, 07 Feb 1996 00:04:43 -0800

To: netsig@tapr.org

Message-ID: <199602070820.AAA14650@tia1.eskimo.com>

Rendered body type: text/plain

At 10:43 AM 2/5/96 -0600, you wrote:

>John

>

>

>

>The definition of a network is:

>

> A group of computers that can communicate with each other, share
>resources (hard drives or printers), and access remote hosts.

>

>

>

>That is straight from my Novell Netware 4.1 System Administration Book.

>

>

>

>John KB8MAU

>

Yep, that sounds like what I'd expect Novell to say. Not that it's a bad
definition, but there are many levels on which networking can occur. See
how applicable that definition is the next time you're in a job search and
the employment office folks tell you that your best resource for finding a
job is to 'network'. Be sure not to ask where to plug in the 10-base-T
connector! ;)

A part of the definition of a network should be a description of the nature
or level of cooperation or resource sharing that is supported in the
envisioned network.

Of course, never forget the 'tennis-shoe' network!

73, Bob, KD7NM

Bob Donnell, KD7NM bob@kd7nm.ampr.org rdonnell@eskimo.com
Western Washington Amateur IP Address Coordinator (206) 775-3651

8. RE: [NETSIG:2332] Re: Definition of a "network"

From: Willson Flor <willf@rrgroup.com>
Date: Wed, 7 Feb 1996 11:09:19 -0600
To: "netsig@tapr.org" <netsig@tapr.org>
Message-ID: <c=US%a=_%p=RRSystemsGroup%l=RRGROUP3960207110919CA004B00@rrgroup3.rrgroup.com>
Rendered body type: text/plain

You wrote:

From: Tim Hayes[SMTP:thayes@hardees.rutgers.edu]
Sent: Tuesday, February 06, 1996 9:38 PM
To: netsig@tapr.org
Subject: [NETSIG:2332] Re: Definition of a "network"

- > The defination of a network is:
- >
- > A group of computers that can communicate with each other, share
- > resources (hard drives or printers), and access remote hosts.

This is a correct definition of a **logical** network.

- Ak! I don't like that one. Just because **devices** are on a network
- together does not mean they can do anything other than modulate
- electrons or photons with information in a way that the other devices
- on the same network can probably demodulate...
-
- Anything else implies that the devices could make use of the
- demodulated information. If I have a netware server and a NFS
- workstation on a network it is unlikely that they can communicate,
- or share resources just because they both talk IEEE 802.*.

You're talking about a **physical** network. Logical networks are networks, too. Your definition is neither more correct nor less so than the other one.

- > That is straight from my Novell Netware 4.1 System Administration Book.
-
- ;)
-
- Concise Oxford Dictionary, 8th Ed., Copyright 1991 Oxford Univ. Press
-
- /network/ <<"netw3:k">> n. & v.
-
- n.
- 4. a chain of interconnected computers, machines, or operations.

Please note that "connections" as mentioned above can be either physical or logical connections. The Oxford definition is completely compatible with either way of thought about a "network."

-Will Flor
willf@rrgroup.com

9. Re: [NETSIG:2334] Re: Definition of a "network"

From: NewsomJ%62SVS.MCCHORD@mhs-gw.mcchord.af.mil (Newsome, SSgt John M)
Date: 08 Feb 96 13:08:17 PST
To: netsig@tapr.org@mhs-gw.mcchord.af.mil
Message-ID: <E4631A31018C2F79@-SMF->
Rendered body type: text/plain

Do you mean "SNEAKERNET"

John

10. BPQ/IP-router/+

From: Rex H Ishmael <rishmael@texhoma.net>
Date: Sun, 11 Feb 1996 20:42:15 -0600

To: netsig@tapr.org
Message-ID: <199602120242.UAA03201@ion3.ionet.net>
Rendered body type: text/plain

I put this out on the bbssig and have yet to hear, but any one running BPQ with the IP router and a BBS software and other servers... I was having mulitple conflicts and took out the ip router and it appears to have settled down ... every other application for BPQ requires steams, or coms identification and most require to know what application they are.. but the ip router asks none of these.. it must be using streams to talk and send information but it apears to not ask for any... would like to have contact with some one that actually runs the ip router and runs multiple other bpq applications... thanks REX

=====
Rex Ishmael, Sr. Environmental Engineer, Halliburton Energy Services
E-Mail:rishmael@halnet.com (work)
E-Mail:rishamel@texhoma.net (home)
Amatuer Mail: WD0AJG@WD0AJG.#SCOK.OK.USA.NOAM
=====

11. Motorola Syntor Questions...

From: Dino Darling <dinod@deltanet.com>
Date: Mon, 12 Feb 1996 18:57:05 -0800
To: netsig@tapr.org
Message-ID: <1.5.4b11.16.19960213025705.1ba79e38@mail.deltanet.com>
Rendered body type: text/plain

Hello to all my fellow TAPR Members! (If you are not a member...JOIN! TAPR is one of the best organizations involved with Packet Radio! The SCDCC in Southern California is too:-)

I have 2 Motorola Syntor radios: model # T34SRAD00BK; serial numbers SN 431HHJ0536 and SN 431HHJ0501.

Questions....

1. Are these radios good for 9600 baud operation?
2. Can they be modified to run as a Digital Duplex Repeater?
3. If not, would anyone like to buy them?

Thats all for now. Please....I need YOUR help! 73!

Dino Darling...KC6RiX @ WB6YMH.#SOCA.CA.USA.NOAM
dinod@deltanet.com

12. Re: [NETSIG:2337] BPQ/IP-router/+

From: Hank Oredson <Hank_Oredson@MENTORG.COM>
Date: Tue, 13 Feb 1996 14:55:36 -0800
To: netsig@tapr.org
Message-ID: <9602132257.AA14580@em-wv03.wv.mentorg.com>
Rendered body type: text/plain

At 05:33 PM 2/12/96 -0600, you wrote:
>I put this out on the bbssig and have yet to hear, but any one running
>BPQ with the IP router and a BBS software and other servers...
>I was having mulitple conflicts and took out the ip router and it
>appears to have settled down ... every other application for BPQ
>requires steams, or coms identification and most require to know
>what application they are.. but the ip router asks none of these..
>it must be using streams to talk and send information but it apears
>to not ask for any... would like to have contact with some one that
>actually runs the ip router and runs multiple other bpq applications...
>thanks REX

Four of us in the Portland area run IPGATE over BPQ along with mutiple other applications. Have no problem with this, it works fine.

Newer BPQ applications allocate their i/o streams dynamically.
Older applications allocate specific i/o streams.

It is possible to have conflicts when you start a newer application first (and it allocates, for example, stream 17) and then start an older application and have it allocate the same stream. The cure is to be very careful that you do not create conflicts.

Hank Oredson @ Mentor Graphics Library Operations
Internet : hank_oredson@mentorg.com "Parts 'R Us!"
Amateur Radio: W0RLI@W0RLI.OR.USA.NOAM

13. Re: [NETSIG:2336] Re: Definition of a "network"

From: Robert Donnell <rdonnell@eskimo.com>
Date: Tue, 13 Feb 1996 20:34:25 -0800
To: netsig@tapr.org
Message-ID: <199602140449.UAA13339@tia1.eskimo.com>
Rendered body type: text/plain

At 11:31 AM 2/9/96 -0600, you wrote:
>Do you mean "SNEAKERNET"
>

Well, without involving the CIA, NSA, KGB, or any of those folks that take interest in folks sneaking about...

... Yeah, that's the one ... :)

73, Bob

Bob Donnell, KD7NM bob@kd7nm.ampr.org rdonnell@eskimo.com
Western Washington Amateur IP Address Coordinator (206) 775-3651

14. AX.25 Extensions to support Negotiation and other Service Related traffic

From: "Tom Moulton" <tmoulton@ram.net>
Date: Thu, 15 Feb 96 12:46:01 EST
To: rose@rats.org (ROSE List), tcp-group@ucsd.edu (TCP Group),
 netsig@tapr.org (netsig tapr)
Cc: tnos-topics@lantz.com (TNOS Topics)
Message-ID: <15021573.22e3@ram.net>
Rendered body type: text/plain

Brian (K04KS) and I have completed the simple extension specification to AX.25.

Brian has implemented it in TNOS, I have not yet implemented it in ROSE.

If you would like to view the documents they are at:

<http://www.rats.org/rose/qbit.html> and
 ax29.html

The QBIT document describes the enhancements to AX.25L2V2 and AX29 defines the format of frames that have the Q Bit active.

As time goes on the AX.29 document will be updated as new protocols are added. Maybe Protocols is a bad word to use, how about calling them Signalling Protocols.

Check them out!

If you are interested you can also check out the
RATS Home Page (<http://www.rats.org/>) as well as
ROSE Home Page (<http://www.rats.org/rose>)

(This was originally sent to rose@rats.org, tcp-group@ucsd.edu, netsig@tapr.org and tnos-topics@lantz.com, YOU may get more than ONE copy of this notice.

Thomas A. Moulton, W2VY
w2vy@ram.net

15. Re:(2) AX.25 Extensions to support Negotiation and other Service Rel

From: "Tom Moulton" <tmoulton@ram.net>
Date: Fri, 16 Feb 96 06:25:24 EST
To: alan@snowcrash.cymru.net
Cc: rose@rats.org, tcp-group@UCSD.EDU, netsig@tapr.org, tnos-topics@lantz.com
Message-ID: <15021573.22ea@ram.net>
Rendered body type: text/plain

>I see one immediate problem with the proposed Q-Bit scheme if used with
>AX.25. One of the control bits is already used in the rest of the world
>for DAMA. So using Qbits may cause all sorts of AX.25 stacks to switch into
>DAMA mode, go full duplex and other fun things.

Remind us where DAMA is described.

>

>Has this specification been checked to ensure it won't trip up DAMA using

>hosts. Would it not in fact make far more sense for the so called Q bit
>to use a different PID and exchange something like

One of our goals was to be totally backward compatible and not cause garbage
to print on the screens of an older implementation so the Different PID
won't work. (I fought for it and got shot down, for good reasons)

We'll look at DAMA and see if there is a way to work around any problems.

Thomas A. Moulton, W2VY
w2vy@ram.net

16. Re: AX.25 Extensions to support Negotiation and other Service Related traffic

From: Alan Cox <alan@cymru.net>
Date: Fri, 16 Feb 1996 10:21:21 +0000 (GMT)
To: tmoulton@ram.net (Tom Moulton)
Cc: rose@rats.org, tcp-group@UCSD.EDU, netsig@tapr.org, tnos-topics@lantz.com
Message-ID: <199602161021.KAA20873@snowcrash.cymru.net>
Rendered body type: text/plain

I see one immediate problem with the proposed Q-Bit scheme if used with
AX.25. One of the control bits is already used in the rest of the world
for DAMA. So using Qbits may cause all sorts of AX.25 stacks to switch into
DAMA mode, go full duplex and other fun things.

Has this specification been checked to ensure it won't trip up DAMA using
hosts. Would it not in fact make far more sense for the so called Q bit
to use a different PID and exchange something like

```
<SABM>
      <UA>
<I pid=Q CANDO>
      <I pid=Q CANDO>
```

and require than a "Q bit" aware host sends a the pid=Q frame as the first
data frame if it supports Qbit stuff.

The performance impact is negligible. On the receiver side it can
send <UA><I pid=Q CANDO> together and both are very tiny frames. The
sender can defer the Q until it gets a Qbit back or needs to send an I frame
and send it as a burst with the real I frame following.

Alan

17. Re: AX.25 Extensions to support Negotiation and other Service Related traffic

From: "Brian A. Lantz" <brian@lantz.com>
Date: Fri, 16 Feb 1996 09:23:19 -0500 (EST)
To: Alan Cox <alan@cymru.net>
Cc: Tom Moulton <tmoulton@ram.net>, rose@rats.org, tcp-group@UCSD.EDU,
netsig@tapr.org, tnos-topics@lantz.com
Message-ID: <Pine.LNX.3.91.960216091638.3950J-100000@lantz.com>
Rendered body type: text/plain

On Fri, 16 Feb 1996, Alan Cox wrote:

```
> I see one immediate problem with the proposed Q-Bit scheme if used with
> AX.25. One of the control bits is already used in the rest of the world
> for DAMA. So using Qbits may cause all sorts of AX.25 stacks to switch into
> DAMA mode, go full duplex and other fun things.
>
> Has this specification been checked to ensure it won't trip up DAMA using
> hosts. Would it not in fact make far more sense for the so called Q bit
> to use a different PID and exchange something like
>
> <SABM>
>      <UA>
> <I pid=Q CANDO>
>      <I pid=Q CANDO>
>
>
> and require than a "Q bit" aware host sends a the pid=Q frame as the first
> data frame if it supports Qbit stuff.
```

HONK! Wrong answer ;-)

The problem is Virtual Circuit IP and separate streams on the same VC.
How do you, for instance, tell xNOS that this 'new' PID is to be applied

to all present and future streams brought up on this VC? And what if a later VC doesn't WANT one of the Q-bit features?

Switching PID's causes problems for xNOS, since it uses several PID's, and can have MANY different streams on a single physical connection in VC mode.

One station can have IP, Netrom, AX25, and ARP all going at the same time. If you use a different PID, you have lost the ONLY way to identify WHICH of these connections is asking to use the Q-bit extension requested.

As for IP using Datagram mode, since the PID is special for IP, switching to another PID causes problems.

Does it have problems with DAMA? Quite possibly. This is why the document is out for viewing and feedback.....

Thanks, Alan!

Brian A. Lantz <http://www.lantz.com> brian@lantz.com

```
REAL PORTION of Microsoft Windows code:
    while (memory_available) {
        eat_major_portion_of_memory (no_real_reason);
        if (feel_like_it)
            make_user_THINK (this_is_an_OS);
        gates_bank_balance++;
    }
```

18. Re:(2) (2) AX.25 Extensions to support Negotiation and other Service

From: "Tom Moulton" <tmoulton@ram.net>
Date: Fri, 16 Feb 96 09:38:44 EST
To: alan@snowcrash.cymru.net
Cc: rose@rats.org, tcp-group@UCSD.EDU, netsig@tapr.org, tnos-topics@lantz.com
Message-ID: <15021573.22f0@ram.net>
Rendered body type: text/plain

```
>> One of our goals was to be totally backward compatible and not cause garba
>ge
>> to print on the screens of an older implementation so the Different PID
>> won't work. (I fought for it and got shot down, for good reasons)
>
>Are there actually TNC's out there stupid enough to pass all PID values to
>the users screen ? If so why haven't they been wiped out by netrom and IP.
>
>Alan
>
```

Stupid or not it is a fact of life.

It is not as stupid as you think. If the packet is part of a CONNECTED link and IS in sequence, then it is likely valid data of one form or another...

Thomas A. Moulton, W2VY
w2vy@ram.net

19. Re: [NETSIG:2338] Motorola Syntor Questions...

From: Richard Hallman <ki3v@connectus.com>
Date: Thu, 15 Feb 1996 21:22:00 pst
To: netsig@tapr.org
Message-ID: <3124147B-00000001@rnodx.org>
Rendered body type: text/plain

```
>Hello to all my fellow TAPR Members! (If you are not a member...JOIN!
TAPR
>is one of the best organizations involved with Packet Radio! The
SCDCC in
>Southern California is too:-)
>
>I have 2 Motorola Syntor radios; model # T34SRAD00BK; serial numbers
>SN 431HHJ0536 and SN 431HHJ0501.
>
>Questions....
>
```


>1. Are these radios good for 9600 baud operation?
 >2. Can they be modified to run as a Digital Duplex Repeater?
 >3. If not, would anyone like to buy them?
 >
 >Thats all for now. Please...I need YOUR help! 73!
 >
 >Dino Darling...KC6RiX @ WB6YMH.#SOCA.CA.USA.NOAM
 >dinod@deltanet.com
 >

First problem you will have is getting the PROM burned for the hamband. We are currently working on that for 441.050. We already have some working at 9600 on other freqs and seem to be working just as well as all of our Mitreks. Use the PacCom Spirit II TNC....Best on the market. Have 8 running here on a backbone right now in Northern Nevada and California.

73 Rich KI3V/7

```
*****
Richard Hallman          ki3v@connectus.com
11870 Heartpine St       ki3v@ki3v.ampr.org
Reno Nv 89506            ki3v@w7ta.#nonev.nv
*****
```

20. Re: (2) AX.25 Extensions to support Negotiation and other Service Rel

From: Alan Cox <alan@cymru.net>
 Date: Fri, 16 Feb 1996 14:19:50 +0000 (GMT)
 To: tmoulton@ram.net (Tom Moulton)
 Cc: rose@rats.org, tcp-group@UCSD.EDU, netsig@tapr.org, tnos-topics@lantz.com
 Message-ID: <199602161419.0AA27510@snowcrash.cymru.net>
 Rendered body type: text/plain

> Remind us where DAMA is described.

I don't know the location of a specification. DAMA uses reserved bits and a polling master/slave scheme to control channel access. There is DAMA code in Wampes, Linux 1.3.61+ and various other primarily german sets. Maybe some of the Wampes people have good pointers ?

> One of our goals was to be totally backward compatible and not cause garbage
 > to print on the screens of an older implementation so the Different PID
 > won't work. (I fought for it and got shot down, for good reasons)

Are there actually TNC's out there stupid enough to pass all PID values to the users screen ? If so why haven't they been wiped out by netrom and IP.

Alan

21. Re: [NETSIG:2346] Re: Motorola Syntor Questions...

From: "Karl F. Larsen" <k5di@acca.nmsu.edu>
 Date: Sun, 18 Feb 1996 05:38:03 -0700
 To: netsig@tapr.org
 Message-ID: <199602181238.FAA26217@acca.nmsu.edu>
 Rendered body type: text/plain

At 08:16 PM 2/17/96 -0600, you wrote:
 >>Hello to all my fellow TAPR Members! (If you are not a member...JOIN!
 >TAPR
 >>is one of the best organizations involved with Packet Radio! The
 >SCDCC in
 >>Southern California is too:-)
 >>
 > First problem you will have is getting the PROM burned for the
 >hamband. We are currently working on that for 441.050.

Richard, if you can crack the e-prom burning hurdle I can use my radio. I have the full manual and it doesn't help on e-proms for frequency control.

We already
 >have some working at 9600 on other freqs and seem to be working just as
 >well as all of our Mitreks. Use the PacCom Spirit II TNC....Best on
 >the market. Have 8 running here on a backbone right now in Northern
 >Nevada and California.
 >
 > 73 Rich KI3V/7
 >
 >*****

>Richard Hallman ki3v@connectus.com
>11870 Heartpine St ki3v@ki3v.ampr.org
>Reno Nv 89506 ki3v@w7ta.#nonev.nv
>*****
>
>
>
Karl F. Larsen ---- k5di@acca.nmsu.edu --- http://rever.nmsu.edu/~k5di/ -->

22. Re: [NETSIG:2345] Re:(2) (2) AX.25 Extensions to support Negotiation and other Service

From: Mike Curtis <wd6ehr@kaiwan009.kaiwan.com>
Date: Sun, 18 Feb 1996 20:51:14 -0800 (PST)
To: netsig@tapr.org
Message-ID: <199602190451.UAA11761@kaiwan009.kaiwan.com>
Rendered body type: text/plain

> >Are there actually TNC's out there stupid enough to pass all PID values to
> >the users screen ? If so why haven't they been wiped out by netrom and IP.
>
> Stupid or not it is a fact of life.
>
> It is not as stupid as you think. If the packet is part of a CONNECTED
> link and IS in sequence, then it is likely valid data of one form
> or another...

Many TNCs have an option to turn this off. But one big reason it's there is that newbies panic when they hear packets through the speaker but see nothing displayed.

-- mike

23. Re: [NETSIG:2349] Re:(2) (2) AX.25 Extensions to support Negotiation

From: "Tom Moulton" <tmoulton@ram.net>
Date: Tue, 20 Feb 96 10:47:07 EST
To: netsig@tapr.org
Message-ID: <15021573.2304@ram.net>
Rendered body type: text/plain

>> Stupid or not it is a fact of life.
>>
>> It is not as stupid as you think. If the packet is part of a CONNECTED
>> link and IS in sequence, then it is likely valid data of one form
>> or another...
>
>Many TNCs have an option to turn this off. But one big reason it's there is
>
>that newbies panic when they hear packets through the speaker but see
>nothing displayed.

That switch is a Monitor switch.

I also think that TNC code (tapr) Ignores the PID that is part of the connected stream and dumps it to the user...

Thomas A. Moulton, W2VY
w2vy@ram.net

24. msys 1.19

From: NewsomJ%62SVS.MCCHORD@mhs-gw.mcchord.af.mil (Newsome, SSgt John M)
Date: 21 Feb 96 08:04:15 PST
To: netsig%tapr.org@mhs-gw.mcchord.af.mil
Message-ID: <01422B31018C2F79@-SMF->
Rendered body type: text/plain

Can NOS work with MSYS ver 1.19. I have a BBS currently running this software and was wondering if I can incorporate it with NOS.

John (KB8MAU)

25. Re: [NETSIG:2350] Re:(2) (2) AX.25 Extensions to support Negotiation

From: Howard Goldstein <howard@Melb.SciAtl.COM>
Date: Wed, 21 Feb 1996 12:28:10 -0500 (EST)
To: netsig@tapr.org

Message-ID: <Pine.SUN.3.91.960221122401.2990A-100000@brandy>
Rendered body type: text/plain

On Wed, 21 Feb 1996, Tom Moulton wrote:

> >Many TNCs have an option to turn this off. But one big reason it's there is
> >
> >that newbies panic when they hear packets through the speaker but see
> >nothing displayed.
>
> That switch is a Monitor switch.
>
> I also think that TNC code (tapr) Ignores the PID that is part of the
> connected stream and dumps it to the user...
>

TNC-2 has a monitor switch, MNONAX25. The PID is trashed in connected mode unless RXBLOCK or the hostmode is turned on in which case it is passed along as anticipated by the protocol spec.

Perhaps it would have been worthwhile to pass it through (useless if output is a character stream) or treat it as like L3 treats a Q bit but with nothing do with with qualified data when the unit expects but a dumb terminal....well, you get the picture.

--
Howard Goldstein <howard@melb.sciatl.com>
#include <std_employer_disclaimer.h> <hg@n2wx.ampr.org>

26. Re: [NETSIG:2350] Re:(2) (2) AX.25 Extensions to support Negotiation

From: Mike Curtis <wd6ehr@kaiwan009.kaiwan.com>
Date: Wed, 21 Feb 1996 11:30:46 -0800 (PST)
To: netsig@tapr.org
Message-ID: <199602211930.LAA16125@kaiwan009.kaiwan.com>
Rendered body type: text/plain

<Monitoring non-text packets>

>>Many TNCs have an option to turn this off. But one big reason it's there is
>>that newbies panic when they hear packets through the speaker but see
>>nothing displayed.

> That switch is a Monitor switch.

Actually, I had in mind commands such as mnonax25 (monitor non-ax25), and generic equivalents. I remember back in "the good ol' days" when "the good ol' boys" would do things like leave a printer running on "the channel". When tcp/ip started being used, they'd complain about waking up in the morning to find a whole package of paper spewed out all over the floor, most with nothing printed on it. I suppose it is not entirely without merit that some say packet is made up of little old ladies of both sexes ;-)

-- mike

27. Re: Re:(2) AX.25 Extensions to support Negotiation and other Service Rel

From: Phil Karn <karn@qualcomm.com>
Date: Wed, 21 Feb 1996 14:12:36 -0800 (PST)
To: tmoulton@ram.net
Cc: alan@snowcrash.cymru.net, rose@rats.org, tcp-group@UCSD.EDU, netsig@tapr.org, tnos-topics@lantz.com
Message-ID: <199602212212.0AA13556@servo.qualcomm.com>
Rendered body type: text/plain

>One of our goals was to be totally backward compatible and not cause garbage
>to print on the screens of an older implementation so the Different PID
>won't work. (I fought for it and got shot down, for good reasons)

I simply cannot believe that this is still a serious consideration. This was a completely bogus complaint 10 years ago, and it's just as bogus now. If a packet is not addressed to you, you are still free to monitor it, but you have absolutely no right to complain if you (or your computer) can't understand it.

But I guess this attitude is expected in a 'service' where some routinely jam repeaters when conversations are conducted in languages they can't understand.

Phil

28. Re:(3) Re:(2) AX.25 Extensions to support Negotiation and other S

From: "Tom Moulton" <tmoulton@ram.net>
Date: Wed, 21 Feb 96 19:36:47 EST
To: karn@qualcomm.com
Cc: alan@snowcrash.cymru.net, rose@rats.org, tcp-group@UCSD.EDU,
netsig@tapr.org, tnos-topics@lantz.com
Message-ID: <15021573.2313@ram.net>
Rendered body type: text/plain

>Phil, repeat after me.. "Never Mind"
>
>If a system using this new PID were to send (CONNECTED) to a tnc that
>did not support it would put garbage in the data stream...
>
>I could care less about what a user monitors...

The reason is that the majority of the users who did not have new tnc code
would not understand why and would blame the network for sending garbage
or messing with the data, etc

Thomas A. Moulton, W2VY
w2vy@ram.net

29. Re:(2) Re:(2) AX.25 Extensions to support Negotiation and other Serv

From: "Tom Moulton" <tmoulton@ram.net>
Date: Wed, 21 Feb 96 19:18:31 EST
To: karn@qualcomm.com
Cc: alan@snowcrash.cymru.net, rose@rats.org, tcp-group@UCSD.EDU,
netsig@tapr.org, tnos-topics@lantz.com
Message-ID: <15021573.2312@ram.net>
Rendered body type: text/plain

>>One of our goals was to be totally backward compatible and not cause garbag
>e
>>to print on the screens of an older implementation so the Different PID
>>won't work. (I fought for it and got shot down, for good reasons)
>
>I simply cannot believe that this is still a serious
>consideration. This was a completely bogus complaint 10 years ago, and
>it's just as bogus now. If a packet is not addressed to you, you are
>still free to monitor it, but you have absolutely no right to complain
>if you (or your computer) can't understand it.

Phil, repeat after me.. "Never Mind"

If a system using this new PID were to send (CONNECTED) to a tnc that
did not support it would put garbage in the data stream...

I could care less about what a user monitors...

Thomas A. Moulton, W2VY
w2vy@ram.net

30. Re: [NETSIG:2354] Re: Re:(2) AX.25 Extensions to support Negotiation and other Service Rel

From: "Karl F. Larsen" <k5di@acca.nmsu.edu>
Date: Thu, 22 Feb 1996 05:57:21 -0700
To: netsig@tapr.org
Message-ID: <199602221257.FAA04257@acca.nmsu.edu>
Rendered body type: text/plain

>But I guess this attitude is expected in a 'service' where some
>routinely jam repeaters when conversations are conducted in languages
>they can't understand.
>
>Phil
>
We got over that problem on the border with Mexico. In fact we have,
just not sure how this is differnet, a bi-lingual voice repeater. Even more
alarming is the node XE2JCE-1 which is a route on my K5DI-1 node.

The single most alarming thing is Mexican hams list meessages on my
BBS and I'm sure they don't understand much. But listing messages is the

thing to do. We have a large population of German soldiers in the area. It is not uncommon to hear high German on a voice repeater. No-one seems to mind Phil.

Perhaps we hams are getting just like plain people...:-)

Karl F. Larsen ---- k5di@acca.nmsu.edu --- <http://rever.nmsu.edu/~k5di/> -->

31. Re: [NETSIG:2351] msys 1.19

From: "Karl F. Larsen" <k5di@acca.nmsu.edu>
Date: Thu, 22 Feb 1996 06:05:47 -0700
To: netsig@tapr.org
Message-ID: <199602221305.GAA04313@acca.nmsu.edu>
Rendered body type: text/plain

At 01:56 AM 2/22/96 -0600, you wrote:
>Can NOS work with MSYS ver 1.19. I have a BBS currently running this
>software and was wondering if I can incorporate it with NOS.
>
>
>
>John (KB8MAU)
>
>

If you have nos set to forward either with FBB or "normal" you should be able to forward with MSYS, if it is set up properly.

Karl F. Larsen ---- k5di@acca.nmsu.edu --- <http://rever.nmsu.edu/~k5di/> -->

32. Re: [NETSIG:656] Tek Radio Meeting

From: Mike Fahmie <MPFahmie@lbl.gov>
Date: Thu, 22 Feb 1996 10:45:44 -0800
To: netsig@tapr.org
Cc: MITCHELL.T@ocf.compuserve.com
Message-ID: <199602221846.KAA01152@mh1.lbl.gov>
Rendered body type: text/plain

I turned on the "Wayback Machine" this morning and looked over some old NETSIG's.
About a year ago, Tim KA5RYF, wrote NETSIG:656 titled "Tek Radio Meeting".

>.....
>Here's what they said....
>
>There will be a new data radio for UHF comming very soon... It will have
>5 watts output, 9600 baud out of the box, and 5 watts of power...
>
>The company is launching into the mobile radio relm, and will be producing
>a 35-50 watt UHF mobile. This might allow them to market a data radio with
>a PA that would raise the 2-5 watt radio up to 50 watts!!! (cool!)
>
>The company did not promise but they may be in the 900 MHz data radio soon,
>since they are already handling paging and other specialized operations on
>900 MHz. The radio would be a 2-5 watt range and the same as the current
>Tekk radios.

=====

Does anyone know if any of this has come to pass?

-Mike-

Mike Fahmie - Advanced Light Source
Lawrence Berkeley National Laboratory
(510) 486-4030 - MPFahmie@lbl.gov
WA6ZTY @ N6EEG

33. Re: [NETSIG:2354] Re: Re:(2) AX.25 Extensions to support Negotiation and other Service Rel

From: Hank Oredson <Hank_Oredson@MENTORG.COM>
Date: Thu, 22 Feb 1996 12:51:23 -0800
To: netsig@tapr.org
Message-ID: <9602222053.AA10975@em-wv03.wv.mentorg.com>
Rendered body type: text/plain

At 01:58 AM 2/22/96 -0600, you wrote:
>>One of our goals was to be totally backward compatible and not cause garbage
>>to print on the screens of an older implementation so the Different PID
>>won't work. (I fought for it and got shot down, for good reasons)
>
>I simply cannot believe that this is still a serious
>consideration. This was a completely bogus complaint 10 years ago, and
>it's just as bogus now. If a packet is not addressed to you, you are
>still free to monitor it, but you have absolutely no right to complain
>if you (or your computer) can't understand it.
>
>But I guess this attitude is expected in a 'service' where some
>routinely jam repeaters when conversations are conducted in languages
>they can't understand.
>
>Phil

"How DARE you use a PID of 0xcc !"

Hank Oredson @ Mentor Graphics	Library Operations
Internet : hank_oredson@mentorg.com	"Parts 'R Us!"
Amateur Radio: W0RLI@W0RLI.0R.U.S.A.NOAM	

34. Re: Re:(2) Re:(2) AX.25 Extensions to support Negotiation and other Serv

From: Phil Karn <karn@qualcomm.com>
Date: Fri, 23 Feb 1996 17:13:31 -0800 (PST)
To: tmoulton@ram.net
Cc: alan@snowcrash.cymru.net, rose@rats.org, tcp-group@UCSD.EDU,
netsig@tapr.org, tnos-topics@lantz.com
Message-ID: <199602240113.RAA05682@servo.qualcomm.com>
Rendered body type: text/plain

>If a system using this new PID were to send (CONNECTED) to a tnc that
>did not support it would put garbage in the data stream...

Well, a properly implemented TNC should ignore PIDs it doesn't understand.
Why else did we put PIDs in AX.25 in the first place?

(If AX.25 had been fleshed out with something analogous to an ICMP
message, then there would be a way to report that you don't implement
a certain PID, but I digress...)

Phil

35. Re:(2) Re:(2) Re:(2) AX.25 Extensions to support Negotiation and oth

From: "Tom Moulton" <tmoulton@ram.net>
Date: Fri, 23 Feb 96 21:52:27 EST
To: karn@qualcomm.com
Cc: alan@snowcrash.cymru.net, rose@rats.org, tcp-group@UCSD.EDU,
netsig@tapr.org, tnos-topics@lantz.com
Message-ID: <15021573.2334@ram.net>
Rendered body type: text/plain

>>If a system using this new PID were to send (CONNECTED) to a tnc that
>>did not support it would put garbage in the data stream...
>
>Well, a properly implemented TNC should ignore PIDs it doesn't understand.
>Why else did we put PIDs in AX.25 in the first place?

One could argue that a regular TNC should discard non F0 frames (ack them)
since there is(was) no other upper layer installed...
>
>(If AX.25 had been fleshed out with something analogous to an ICMP
>message, then there would be a way to report that you don't implement
>a certain PID, but I digress...)

Phil, with the proposed extension we CAN add ICMP-like support!

(in fact we can define a number of different protocols)

Thomas A. Moulton, W2VY
w2vy@ram.net

36. Re: [NETSIG:2359] Re: Tek Radio Meeting

From: "Gwyn Reedy, W1BEL" <gwyn@paccomm.com>
Date: Mon, 26 Feb 1996 10:03:16 -0500 (EST)
To: netsig@tapr.org
Message-ID: <Pine.LNX.3.91.960226100118.8465B-100000@paccomm>
Rendered body type: text/plain

On Thu, 22 Feb 1996, Mike Fahmie wrote:

> I turned on the "Wayback Machine" this morning and looked over some old
> NETSIG's.
> About a year ago, Tim KA5RYF, wrote NETSIG:656 titled "Tek Radio Meeting".
>
> >.....
> >Here's what they said....
> >
> >There will be a new data radio for UHF coming very soon... It will have
> >5 watts output, 9600 baud out of the box, and 5 watts of power...

>
> Does anyone know if any of this has come to pass?
>

> -Mike-

>
>
>
>
> Mike Fahmie - Advanced Light Source
> Lawrence Berkeley National Laboratory
> (510) 486-4030 - MPFahmie@lbl.gov
> WA6ZTY @ N6EEG
>

Yes, the 5 watt model is the KS-1000. It exists now. There may be delays getting them for US Commercial frequencies due to the FCC approval process, but for export and amateur use they can be purchased now.

Gwyn Reedy, W1BEL gwyn@paccomm.com W1BEL@amsat.org

PacComm Packet Radio Systems, Inc. +(813) 874-2980 Fax:+(813) 872-8696
4413 N. Hesperides St. BBS: +(813) 874-3078 (V.34)
Tampa, FL 33614-7618 USA info@paccomm.com http://www.paccomm.com

37. RE: [NETSIG:2363] Re: Tek Radio Meeting

From: Ron Curry <recurry@insighttec.com>
Date: Tue, 27 Feb 1996 19:43:36 -0800
To: "netsig@tapr.org" <netsig@tapr.org>
Message-ID: <01BB054B.E3612060@expressp5.insighttec.com>
Rendered body type: text/plain

Gwyn,
How much?

Ron Curry

From: Gwyn Reedy, W1BEL[SMTP:gwyn@paccomm.com]
Sent: Monday, February 26, 1996 5:44 PM
To: netsig@tapr.org
Subject: [NETSIG:2363] Re: Tek Radio Meeting

On Thu, 22 Feb 1996, Mike Fahmie wrote:

> I turned on the "Wayback Machine" this morning and looked over some old
> NETSIG's.
> About a year ago, Tim KA5RYF, wrote NETSIG:656 titled "Tek Radio Meeting".
>
> >.....
> >Here's what they said....
> >
> >There will be a new data radio for UHF coming very soon... It will have
> >5 watts output, 9600 baud out of the box, and 5 watts of power...

>
> Does anyone know if any of this has come to pass?
>

> -Mike-

>
>
>
>
> Mike Fahmie - Advanced Light Source
> Lawrence Berkeley National Laboratory

> (510) 486-4030 - MPFahmie@lbl.gov
> WA6ZTY @ N6EEG
>

Yes, the 5 watt model is the KS-1000. It exists now. There may be delays getting them for US Commercial frequencies due to the FCC approval process, but for export and amateur use they can be purchased now.

Gwyn Reedy, WIBEL gwyn@paccomm.com WIBEL@amsat.org

PacComm Packet Radio Systems, Inc. +(813) 874-2980 Fax:+(813) 872-8696
4413 N. Hesperides St. BBS: +(813) 874-3078 (V.34)
Tampa, FL 33614-7618 USA info@paccomm.com http://www.paccomm.com

38. Re: [NETSIG:2344] Re: AX.25 Extensions to support Negotiation and other Service Related traffic

From: ferracci@imagnet.fr (Laurent Ferracci - F1JKJ)
Date: Wed, 28 Feb 1996 21:51:52 GMT
To: netsig@tapr.org
Message-ID: <3134c83f.8964247@mail.imagnet.fr>
Rendered body type: text/plain

On Sat, 17 Feb 1996 19:54:00 -0600 (CST), you wrote:

>Does it have problems with DAMA? Quite possibly. This is why the document
>is out for viewing and feedback.....

Hi,

I've downloaded and read the specifications, and it seems to me obvious that there will be some problems with DAMA stations.

A DAMA frame uses the fifth bit of the SSID (that "N" bit) to tell the other end about DAMA capability.

Let's imagine Q-bit is implemented as described:

- A DAMA slave station who receives a "N=0 frame" (SABM or UA) will send a RR0 and then wait for being polled before to sending anything else...
- A "N=0 station" who receives a DAMA frame will switch to Q-bit negotiation, even if the DAMA station has no Q-bit possibility...

That's why, IMHO, some changes have to be made !

I would suggest to swap Q and N bits.

DAMA stations have their SSID sixth bit set to one, so:

- When a connection is initiated between a DAMA and a "Q-station", the first one will have bit 5=0 and 6=1, the other will have 5=1 and 6=0, so no negotiation will occur, the contact will remain "normal" (neither DAMA nor "Q").
- In the future, DAMA could be implemented as a compression method, and a DAMA connection could be negotiated using CIF query/response as other ones.

What about it ?

For those looking for DAMA specifications, i have a document called "DAMA implementation methods for system-programmers"...but it's in german :-(
If someone wants to traduce it, just Email me and i'll send it UUencoded.

-- +-----+-----+
-- | From Laurent FERRACCI, F1JKJ | > ferracci@imagnet.fr < |
-- | Montpellier, FRANCE | http://www.imagnet.fr/~ferracci |
-- +-----+-----+
--
-- [PGP key on public-key servers or homepage]

March 1996

Original source file: netsig.9603

Source: http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.9603

1. DAMA docs online

From: ferracci@imagnet.fr (Laurent Ferracci - F1JKJ)
Date: Thu, 29 Feb 1996 10:24:44 GMT
To: netsig@tapr.org
Message-ID: <31357860.41264099@mail.imagnet.fr>
Rendered body type: text/plain

Hi,

For those interested in DAMA protocol (compatibility with proposed Q-bit extension), i've put together some documents online:

<http://www.imagnet.fr/~ferracci/dama.html>

73 !

```
-- +-----+-----+
-- | From Laurent FERRACCI, F1JKJ | > ferracci@imagnet.fr < |
-- | Montpellier, FRANCE | http://www.imagnet.fr/~ferracci |
-- +-----+-----+
--
-- [ PGP key on public-key servers or homepage]
```

2. Apologies

From: Steve Stroh <strohs@halcyon.com>
Date: Sun, 3 Mar 1996 15:07:25 -0800 (PST)
To: TAPR Networking SIG List <netsig@tapr.org>
Message-ID: <Pine.Ult.3.91.960303150307.7127L-100000@coho.halcyon.com>
Rendered body type: text/plain

NETSIG is being neglected, and I'm the cause. As some of you may know, I'm the local co-host for this year's ARRL and TAPR Digital Communications Conference to be held in Seattle. What that's meant for NETSIG is that most of my time on the keyboard lately has gone into keeping up with topics relating to the DCC rather than what's going on with NETSIG. I don't expect this situation to continue indefinitely, but all I can do at the moment is to keep up with postings and administrivia in NETSIG, such as handling the increasing amount of bounced messages from systems that aren't mailing list aware.

Thanks for your patience.

Steve Stroh N8GNJ
NETSIG Moderator
strohs@halcyon.com

```
--
Steve Stroh N8GNJ      strohs@halcyon.com      | 1996 ARRL & TAPR Dig. Comm.
Amateur Radio TCP/IP  n8gnj@sw.n8gnj.ampr.org | Conf. in Seattle Sep. 20-22
```

3. 1996 ARRL and TAPR Digital Communications Conference

From: Greg Jones <wd5ivd@tapr.org>
Date: Mon, 4 Mar 1996 15:52:53 -0600 (CST)
To: netsig@tapr.org (NETSIG mailing), bbssig@tapr.org (BBS SIG mailing),
aprssig@tapr.org (BBS SIG mailing), hfsig@tapr.org (HF SIG mailing),
dsp-93@tapr.org (DSP-93 Build), ss@tapr.org, tapr-tnc@tapr.org
Message-ID: <199603042152.PAA21342@tapr.org>
Rendered body type: text/plain

Press Release. Please distribute as widely as possible. <http://www.tapr.org>
March 1st, 1996

ARRL and TAPR Digital Communications Conference
September 20-22, 1996
Seattle, WA, U.S.A.

1996 ARRL and TAPR Digital Communications Conference

Mark your calendar and start making plans to attend the year's premier event in amateur radio digital communications --

The 1996 ARRL and TAPR Digital Communications Conference will be held September 20-22, 1996, in Seattle, Washington -- just minutes from the SeaTac Airport. Local sponsors include the Puget Sound Amateur Radio TCP/IP Group and Boeing Employees Amateur Radio Society (BEARS).

The ARRL and TAPR Digital Communications Conference is an international forum for radio amateurs and experts in digital communications, networking, and related technologies to meet, publish their work, and present new ideas and techniques for discussion. Presenters and attendees will have the opportunity to exchange ideas and learn about recent hardware and software advances, theories, experimental results, and practical applications. This year marks the first year in which the ARRL Digital Communications Conference and TAPR Annual General Meeting have joined into one conference!

Anyone interested in digital communications is invited to submit a paper for publication in the Conference Proceedings. Presentation at the Conference is not required for publication. Papers are due by July 23, 1996, and should be submitted to Maty Weinberg, ARRL, 225 Main St., Newington, CT 06111 U.S.A. or via Internet at lweinberg@arrl.org. Please contact Maty for detailed format requirements. Papers are due by July 23, 1996

ARRL and TAPR especially welcome papers from full time students to compete for the first annual student papers award. Two \$500 travel awards will be given, one in each of the following categories: a) best technical/theory-oriented paper by a student, and b) best educational or community-oriented application paper by a student. The paper should relate directly to a wireless digital communication topic (see guidelines for more information). Papers coauthored by educators or telecommunications professionals are also eligible for this award, as long as a student is the first author. First year awards have been funded through a grant by The ARRL Foundation, Inc. Deadline for receipt of finished student paper manuscript: June 11, 1996. Please note that this deadline is different than the general conference submission date. For full details and paper guidelines, contact TAPR or check <http://www.tapr.org>.

The current schedule has a workshop and student papers on Friday afternoon. Conference Papers, Introductory thread, Lunch, and Dinner on Saturday. Sunday will have additional paper sessions, if necessary, as well as one or more workshops. Workshops will include Keith Sproul, WU2Z, on APRS packet-location software, Dewayne Hendricks, WA8DZP, on "How to utilize Part 15 Radios for Ham Applications" and a workshop on Wireless Networking using WA4DSY 56K RF modem technology and its accessories. See the advanced registration form for more details as well as <http://www.tapr.org>

For more information on the Conference, registration, and hotel reservations please contact TAPR at the address below.

TAPR Office:
8987-309 E. Tanque Verde Rd. #337
Tucson, AZ 85749-9399
Phone: (817) 383-0000
Fax: (817) 566-2544

Internet E-Mail: tapr@tapr.org
Internet Web: <http://www.tapr.org>

4. Bulletin Board for Tekk, PacCom & BayCom

From: Mike Fahmie <MPFahmie@lbl.gov>
Date: Thu, 07 Mar 1996 11:32:19 -0800
To: netsig@tapr.org
Message-ID: <199603071933.LAA27253@mh1.lbl.gov>
Rendered body type: text/plain

I recently stumbled upon three newly formed bulletin boards devoted to Tekk, PacComm and BayCom. They are new and don't have much on them yet. It is not clear if they are "official" or not, they appear to be associated with SANCO/SM2IRZ which appears to be an amateur equipment dealer in Sweden.

They are located at <http://www.algonet.se/~sm2irz/wwwboard/board.htm>

-Mike-

Mike Fahmie - Advanced Light Source
Lawrence Berkeley National Laboratory
(510) 486-4030 - MPFahmie@lbl.gov
WA6ZTY @ N6EEG

5. RM-8737 Comments Posted to WWW.TAPR.ORG

From: "Steven R. Bible" <sr bible@mindport.net>
Date: Sat, 09 Mar 1996 22:35:20 -0500
To: tapr-bb@tapr.org, netsig@tapr.org
Message-ID: <1.5.4b11.32.19960310033520.00690164@mindport.net>
Rendered body type: text/plain

Comments to RM-8737, Ammendment of Part 97 of the Commission's Rules
Governing the Amateur Radio Service to Facilitate Spread Spectrum
Communications are being posted to

<http://www.tapr.org/ss>

The following comments are presently posted:

Southern California Repeater and Remote Base Association (SCRRBA), 2/23/96
TAPR Comments 2/26/96
Robert A. Buaas, K6KGS 2/26/96
National Communications System, 2/26/96
The Indiana Repeater Council, 2/28/96
Henry Ruh, KB9FO, Publisher, Amateur Television Quarterly, 2/28/96
Charles M. Albert, Jr. KC6UFM, 3/4/96
Mike Cheponis, K3MC 3/4/96

Comments from the following will be posted as time permits:

Nels Harvey, WA9JOB, 2/20/96
Witt Brown, WB0CJX, Frequency Coordination Chairman
of the Mid-America Coordination Council, Inc., 2/26/96
George Isely, WD9GIG, President
of the Mid-America Coordination Council, Inc., 2/26/96
The San Bernardino Microwave Society, 2/20/96
SouthEastern Repeater Association, Inc., 2/23/96
John Mock, KD6PAG, 2/27/96

6. jnos

From: kcubilo@northland.lib.mi.us
Date: Sun, 10 Mar 1996 10:31:47 -0500 (EST)
To: netsig@tapr.org
Message-ID: <199603101531.KAA04358@hostserver.merit.edu>
Rendered body type: text/plain

hi have been trying to locate a copy of jnos with the
converse and callbook options compiled into it along with
netrom support. does anyone know where i can find some-
thing like this. want to utilize this for my bbs/gateway
system i'm settting up here untill we make the move to
t-nos. any help greatly appreciated
we8w
kcubilo@northland.lib.mi.us

7. RM-8737 Comments Posted to WWW.TAPR.ORG

From: "Steven R. Bible" <sr bible@mindport.net>
Date: Mon, 11 Mar 1996 12:34:53 -0500
To: ss@tapr.org, netsig@tapr.org, tcp-group@ucsd.edu, amsat-bb@amsat.org
Message-ID: <1.5.4b11.32.19960311173453.00692140@mindport.net>
Rendered body type: text/plain

Comments and reply comments to RM-8737, Ammendment of Part 97 of the
Commission's Rules Governing the Amateur Radio Service to Facilitate Spread
Spectrum Communications are being posted to

http://www.tapr.org/ss/rule_changes.html

TAPR will endeavor to keep the page current.

The following comments are presently posted:

Robert A. Buaas, K6KGS 2/23/96
Southern California Repeater and Remote Base
Association (SCRRBA), 2/23/96
TAPR Comments 2/26/96
National Communications System, 2/26/96
George Isely, WD9GIG, President, Mid-America Coordination
Council, Inc., 2/26/96
Whit Brown, WB0CJX, Frequency Coordination Chairman,
Mid-America Coordination Council, Inc., 2/26/96
The Indiana Repeater Council, 2/28/96
Henry Ruh, KB9FO, Publisher, Amateur Television Quarterly, 2/28/96

Charles M. Albert, Jr. KC6UFM, 3/4/96
Mike Cheponis, K3MC 3/4/96

Reply Comments from:

Mike Cheponis, K3MC 3/6/96
Bill Tynan, W3XO 3/11/96

Comments from the following will be posted as time permits:

Nels Harvey, WA9JOB, 2/20/96
The San Bernardino Microwave Society, 2/20/96
SouthEastern Repeater Association, Inc., 2/23/96
John Mock, KD6PAG, 2/27/96

- Steve, N7HPR

srbible@mindport.net
n7hpr@amsat.org
n7hpr@tapr.org

8. am i in right group ?

From: Frank Paxton III <paxton@sound.net>
Date: Wed, 13 Mar 1996 11:34:34 -0600
To: netsig@tapr.org
Message-ID: <3147072A.58D9@sound.net>
Rendered body type: text/plain

hi. greg jones suggested i post here for information i need on a
9600 baud radio conversion.

if this is the wrong group for me to ask on please advise via direct
e-mail and i will immediately unsubscribe.

if not: here is my request. i am putting an RCA TAC 310 on 9600 baud.
this is an older 440 commercial eprom radio. i have the receive working
nicely, and i'm feeding the Varactor Diode in the VCO Stage with a
10k resistor. the line is isolated. i have marginal sucess. any pings
over 20 bytes crash heavily. my path seems fine. plenty of power.
anyone having insight, having done the conversion, or willing to talk
to me about possible remedies please e-mail direct.

thank you !

frank. ng0n.

9. Re: [NETSIG:2373] am i in right group ?

From: Bob Donnell <rdonnell@eskimo.com>
Date: Sat, 16 Mar 1996 10:30:17 -0800 (PST)
To: netsig@tapr.org
Message-ID: <199603161830.KAA28261@eskimo.com>
Rendered body type: text/plain

my mailer claims 'Frank Paxton III' is rumored to have said:

>
> if not: here is my request. i am putting an RCA TAC 310 on 9600 baud.
> this is an older 440 commercial eprom radio. i have the receive working
> nicely, and i'm feeding the Varactor Diode in the VCO Stage with a
> 10k resistor. the line is isolated. i have marginal sucess. any pings
> over 20 bytes crash heavily. my path seems fine. plenty of power.
> anyone having insight, having done the conversion, or willing to talk
> to me about possible remedies please e-mail direct.
>
> thank you !
>
> frank. ng0n.
>
>

The problem may be that the radio you're using >is< a PLL radio. What
happens is that the radio's phase-locked loop is attempting to undo the
frequency modulation that you're applying.

If the radio's loop response time is fast, and if the packet you generate
contains several bit times of no frequency shifts, the PLL manages to
correct for most or all of the frequency error that it perceives. The PLL

doesn't know that you >want< that error, so it tries to remove it. A side effect is that the center frequency of the radio 'wanders', and this severely degrades the ability of the receiving modem to figure out when the center of the frequency change occurs. Just as bad, is that if the receiver has a fairly narrow IF filter, some of the time your signal will be at the edge or outside the main part of the passband of the filter.

These kinds of problems are tough to solve. In the case of the Alinco DR-1200, the radio usually gets used for 1200 baud only, or sold to someone who'll just use it for 1200 baud use. There has been no successful correction for the problems in that radio that I've heard of.

What you might want to look for in your radio is whether the PLL generates the transmit frequency directly (or via multipliers) or if there is an oscillator used to mix with the PLL output to get the UHF signal. If there's another oscillator, and it's outside the PLL, investigate if that oscillator can be FM'd. Since it would be outside the loop, you won't be fighting the PLL, and your chances of success go way up. The Icom IC-225, IC-290, IC-490, and other multimode radios usually do this one way or another.

Another alternative that could work, but I've never seen a success story on, would be to attempt to FM the reference oscillator crystal just a little. What you're attempting to do here is to cause the reference frequency to change in the right direction just enough so that the PLL is fooled into believing there is no frequency error, and therefore, no need for correction. As I said, I've seen no success stories for this technique, though it has been mentioned several times as a way to solve the problem.

By the way, the best way to see the problem (and its severity) is to use a service monitor that has a digital trace capture capability. Then you can 'single trace' the monitor until you see the condition where several bit times occur with no frequency transitions. If/when the signal looks like a round-shouldered square wave with no tendency to move toward center frequency, and no tendency for the frequency to wander, then you've got it perfect. I got quite an education in this while I was at AEA, and had access to the equipment available to view the signals, as described. Also, make sure that the monitor has no low-pass filter, or has the ability to switch it out. The monitor needs to be able to pass frequencies up to 5 kHz with flat response, and more is better. The 'best' monitor I've seen/used for looking at the problem is made by Marconi.

Hope that helps, and as far as I'm concerned, this is one of the best places to bring up this topic.

73, and good luck!

Bob

10. Re: [NETSIG:2373] am i in right group ?

From: wb9mjn@wb9mjn.ampr.org
Date: Sat, 16 Mar 96 13:18:23 UTC
To: netsig@tapr.org
Message-ID: <9525@wb9mjn.ampr.org>
Rendered body type: text/plain

Hi Frank...

Preexisting radios that modulate a PLL VCO typically cannot be made to work satisfactorily for 9600 Baud.

There's a CATCH 22 at work here. One typically starts out with a radio that has too wide a PLL loop filter, and the 9600 baud (4800 hz) signal is reacted to by the PLL action. This distortion corrupts the signal. Then one goes about narrowing the PLL loop filter, and the result is good modulation, but the PLL cannot switch from TX to RX in a useful time.

This is why radios such as Syntors (I'm not familiar with equivalent RCA and GE radios) are not used on 9600 baud Packet. MICORS and MITREKS are more common. IE, Crystal Radios.

A Multi-mode radio can usually be made to work on 9600 baud, since the linear mixing scheme (to enable SSB) is also used in FM, with a IF frequency Crystal Carrier Oscillator (that is direct FM modulated).

Other exceptions are PLL radios that have two references, and do not modulate the PLL, but both the references simultaneously. If the proportions of modulation on each reference are right, the signal into the PLL Phase Detector, and the Reference into the PLL Phase Detector, have minimal phase change, and

the PLL is effectively isolated from the modulation. There are very few radios built like this out there tho. I ve only run across on commercial radio like this, and it was for 800 Mhz.

73, Don.

Mailbox : WB9MJN @ N9HSI.IL.USA.NA
AMPRNet : wb9mjn@wb9mjn.ampr.org[44.72.98.19]
Internet: wb9mjn%wb9mjn.ampr.org%hydra-gw.carleton.ca

11. Re: [NETSIG:2375] Re: am i in right group ?

From: Greg Jones <wd5ivd@tapr.org>
Date: Wed, 20 Mar 1996 10:06:09 -0600 (CST)
To: netsig@tapr.org
Cc: morganb@admin.inetport.com (Robert B. Morgan)
Message-ID: <199603201606.KAA14197@tapr.org>
Rendered body type: text/plain

Hopefully Bob Morgan is back on-line with his new provider. Bob has been talking to Frank and I believe lthe ast message I saw indicated that Bob had solved the problem on this radio. It could be converted.

I'll cc Bob so he stays in the loop and can relay what he told Frank.

Cheers - Greg

>
>
> Hi Frank...
>
> Preexisting radios that modulate a PLL VCO typically cannot be made to work
> satisfactorily for 9600 Baud.
>
> There s a CATCH 22 at work here. One typically starts out with a radio that
> has too wide a PLL loop filter, and the 9600 baud (4800 hz) signal is reacted
> to by the PLL action. This distortion corrupts the signal. Then one goes
> about narrowing the PLL loop filter, and the result is good modulation, but
> the PLL cannot switch from TX to RX in a useful time.
>
> This is why radios such as Syntors (i m not familiar with equivilent RCA
> and GE radios) are not used on 9600 baud Packet. MICORS and MITREKS are more
> common. IE, Crystal Radios.
>
> A Multi-mode radio can usually be made to work on 9600 baud, since the
> linear mixing scheme (to enable SSB) is also used in FM, with a IF frequency
> Crystal Carrier Oscillator (that is direct FM modulated).
>
> Other exceptions are PLL radios that have two references, and do not modulate
> the PLL, but both the references simultaneously. If the proportions of
> modulation on each reference are right, the signal into the PLL Phase Detector,
> and the Reference into the PLL Phase Detector, have minimul phase change, and
> the PLL is effectively isolated from the modulation. There are very few
> radios built like this out there tho. I ve only run across on commercial
> radio like this, and it was for 800 Mhz.
>
>
> 73, Don.
>
> Mailbox : WB9MJN @ N9HSI.IL.USA.NA
> AMPRNet : wb9mjn@wb9mjn.ampr.org[44.72.98.19]
> Internet: wb9mjn%wb9mjn.ampr.org%hydra-gw.carleton.ca
>
>

12. Re: [NETSIG:2374] Re: am i in right group ?

From: Chuck Hast <wchast@utilpart.com>
Date: Wed, 20 Mar 1996 11:04:59 -0500 (EST)
To: netsig@tapr.org
Message-ID: <Pine.3.89.9603201030.B3003-0100000@tma1.noname>
Rendered body type: text/plain

A radio of reasonable cost which uses modulation on both the reference and the VCO is the Motorola Radius series radios, those which have a 16 pin aux connector on the back have all the needed IO for 9k6 data.

If you can get your hands on a copy of the service manual or diagrams of the same you can see how the modulation is routed to both ref and VCO. It is quite straight forward and best of all works quite well. Even at 4800

baud which has a low frequency component of 11 hz this radio will follow the data level changes with minimal problems. I think that if you have a PLL type radio, and would like to put data on it, a look at the Motorola radios would be a good point to start from. Many of the newer radios which also do DPL (Digital Private Line) or digital coded squelch as opposed to tone coded squelch have some way of modulating the ref oscillator because DPL is nothing more than very low frequency data. I believe in the case of the Radius the low frequency response goes down to about .5hz.

In these type of radios there is a balance pot or pots used to set up the proper proportion of modulation on each oscillator.

Chuck Hast e-mail wchast@gateway.utilpart.com

HAST CONSULTING Tampa FL.:
Using radio for what it does best, Data Communications.

Grupo Datapac Ltda:Costa Rica :
Aplicando la radio al mundo de la comunicacion digital, extendiendo el mundo de la computacion a todo el planeta.

Running OS/2 WARP and LINUX on these boxes.

Amateur Packet radio e-mail kp4djt@kp4djt.#tpa.fl.usa.noam
Ampr.org kp4djt.ampr.org
AX.121 3100813077

13. Re: [NETSIG:2375] Re: am i in right group ?

From: Mike Curtis <wd6ehr@kaiwan009.kaiwan.com>
Date: Thu, 21 Mar 1996 14:11:54 -0800 (PST)
To: netsig@tapr.org
Message-ID: <199603212211.0AA21267@kaiwan009.kaiwan.com>
Rendered body type: text/plain

> A Multi-mode radio can usually be made to work on 9600 baud, since the
> linear mixing scheme (to enable SSB) is also used in FM, with a IF frequency
> Crystal Carrier Oscillator (that is direct FM modulated).

The Kenwood TW-4000 is an FM rig that uses a crystal oscillator to get the transmitter offset, and is modulated there.

If the PLL doesn't have to change frequency, but stays put (and running!) during transmit and receive, then PLL lock time isn't a factor. This is the case when running full duplex, as on satellites, etc.

But in general, it's a lot less headache to stay away from PLL synthesized rigs for 9600 baud - especially if any of this is over your head :-)
Mitreks, Maxars, Moxys, etc., can be had for a song. I've seen 2m Moxys as cheap as \$15.

-- mike

14. TAPR Virtual Meeting, Workshop, Seminar Page

From: Greg Jones <wd5ivd@tapr.org>
Date: Tue, 26 Mar 1996 00:24:20 -0600 (CST)
To: tapr-bb@tapr.org (TAPR-BB mailing), netsig@tapr.org (NETSIG mailing),
bbssig@tapr.org (BBS SIG mailing)
Message-ID: <199603260624.AAA00696@tapr.org>
Rendered body type: text/plain

TAPR has updated its TAPR Virtual Meeting, Workshop, Seminar Page

We have added an interview with Joe Borvitz, WA5VMS, concerning Land Mobile Radio Modifications.

The interview took place after the Green Country Convention this past week. The 30 min interview with Joe Borvitz, WA5VMS, focuses on Land Mobile Radio Modifications and issues for amateur radio usage. Joe is one of the two authors of the upcoming TAPR Land Mobile Radio Modifications Book. Joe covers general information on several radios, minimum test equipment needed, prices, and some general thoughts on the subject at hand.

The TAPR book should be available later this year.

<http://www.tapr.org>

15. Audio on TAPR

From: Greg Jones <wd5ivd@tapr.org>
Date: Fri, 29 Mar 1996 01:44:14 -0600 (CST)
To: netsig@tapr.org (NETSIG mailing)
Message-ID: <199603290744.BAA01655@tapr.org>
Rendered body type: text/plain

Has anyone had a chance too listen to the chat with Joe WA5VMS on the TAPR web page.

Was wondering if people thought we should try to do more of that or not.
or if the content was good ?

Cheers - Greg, WD5IVD

16. update: TACTEC 310 9600 conversion

From: Frank Paxton III <paxton@sound.net>
Date: Thu, 28 Mar 1996 09:41:12 -0600
To: netsig@tapr.org
Message-ID: <315AB318.14B0@sound.net>
Rendered body type: text/plain

gentlemen:

thanks to all who have advised me on VCO/PLL radio conversions.
thanks to wa0znl, lynn richardson, we have a mod that is allowing
the radio/ mfj 1270c to ping 700 byte packets with 100 percent return !
lynn has made nice drawing of the mods for any who need them.

the mods however don't seem to fly with my kantronics 9612 modem,
where equalization occurs on the receive side of the tnc rather than
on the transmit side. the 'jumpers' in the MFJ are mysterious and refer
to 'waveforms' and the like and are not explicitly explained.

i had hoped to 'copy' the txa conditioning that the MFJ does, but have
no clue as to what it is.... the MANUAL say's to 'try different jumper
settings until a good eye pattern is observed !'

anyone with any ideas on this .. please e-mail me.

ng0n. frank.

works for THEM but not for me.

17. Midland 13-509@9k6?

From: n7oo@uugate.wa7slg.ampr.org
Date: Thu, 28 Mar 96 19:10:07 mdt
To: netsig@tapr.org
Message-ID: <3754@uugate.wa7slg.ampr.org>
Rendered body type: text/plain

The eye pattern out of the discriminator on my two 13-509's looks
terrible and the 9600 baud reception is very poor. Has anyone on
this group had success using the 13-509's at 9k6?
73 de Jack

18. Re: [NETSIG:2380] Audio on TAPR

From: Richard Schiavo <rschiavo@ns.host.vactiontime.net>
Date: Fri, 29 Mar 1996 09:49:52 -0500
To: netsig@tapr.org
Message-ID: <1.5.4b13.32.19960329144952.00676ddc@ns.host.vacationtime.net>
Rendered body type: text/plain

At 01:59 AM 3/29/96 -0600, you wrote:

>Has anyone had a chance too listen to the chat with Joe WA5VMS on the TAPR
>web page.

>

>Was wondering if people thought we should try to do more of that or not.
>or if the content was good ?

>

>Cheers - Greg, WD5IVD

>

I specifically only use the REAL AUDIO OPTIONS when I connect to your web site.

I find that it frees up my attention from always having to look at a pc screen inorder to get the information. The real audio sounds on some of the messages could stand some improving in quality, but other than that it is very handy, I can be doing other things and LISTENING TO THE INFO RATHER THAN HAVE TO "READ" IT...

Keep up the good work.

Rick Schiavo
(KF4WQ)

March 29, 1996
9:49 am

19. Re: [NETSIG:2380] Audio on TAPR

From: Carol Byers <crlbyers@garlic.com>
Date: Fri, 29 Mar 1996 10:32:44 -0800
To: netsig@tapr.org
Message-ID: <315C2CCC.63C6@garlic.com>
Rendered body type: text/plain

Hi Greg,

I would like to listen to it, but like most have little time these days. Also, need a sound card, and software. Your doing a great job of pushing new stuff, and don't get discouraged if the rest of have trouble keeping up. We'll get there, and are interested in what you are doing.

Carol

20. Re: [NETSIG:2380] Audio on TAPR

From: Sid Ashen-Brenner <sashen@midusa.net>
Date: Fri, 29 Mar 1996 17:33:27 -0600
To: netsig@tapr.org
Message-ID: <199603292333.RAA01719@services.midusa.net>
Rendered body type: text/plain

At 01:59 AM 3/29/96 -0600, you wrote:
>Has anyone had a chance too listen to the chat with Joe WA5VMS on the TAPR
>web page.
>
>Was wondering if people thought we should try to do more of that or not.
>or if the content was good ?

Well
There's Hertz, and then there's not exactly.
I was going to try and listen, went to the trouble to download and install the Real Audio software ... only to find out that it won't run on my 386. Shame on me for not having at least a Pentium 133.

Is there going to be a transcription of it avilable somewhere?

73 de Sid N00BM Salina, Ks.

Sid Ashen-Brenner (n0obm) Packet: n0obm @ n0obm.#ncks.ks.usa.noam
Salina Regional Health Center Fidonet: 1:295/6 Salina Packet Systems BBS

Salina, Kansas 67401
sashen@midusa.net

April 1996

Original source file: netsig.9604

Source: http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.9604

1. Re: [NETSIG:2382] Midland 13-509@9k6?

From: wb9mjn@wb9mjn.ampr.org
Date: Fri, 29 Mar 96 21:19:26 UTC
To: netsig@tapr.org
Message-ID: <9584@wb9mjn.ampr.org>
Rendered body type: text/plain

Hi Jack,

Yes, that discriminator on the 13-509 has quite a high output impedance. And any capacitance at all will zap the audio.

We use the 13-509s here for links. The mods I developed for them were published in "220 NOTES".

The mods were specific to using the K9NG modem.

I also eliminated the relay T/R switch. But again, the mods are specific to the K9NG modem, and would require the +9 and +12 volt switched power sources that the K9NG modem supplies.

To make the audio out of the discriminator look nice, u need a buffer amp. I made one out of an op amp. I loaded the discriminator with a 20 K load, then passed the audio thru a RC pole to help reduce the IF frequency noise. Then thru an Op Amp emitter follower hook up with large coupling capacitors, and biasing.

When I first connected up a 13-509 to the K9NG modem, without a op amp discriminator buffer, I noticed I could control the DCD light activity by the length of RG 174 coax between the radio and the modem ! Hi hi. The buffer took care of that, of course.

73, Don.

Mailbox : WB9MJN @ N9HSI.IL.USA.NA
AMPRNet : wb9mjn@wb9mjn.ampr.org[44.72.98.19]
Internet: wb9mjn%wb9mjn.ampr.org@hydra-gw.carleton.ca

2. Re: [NETSIG:2381] update: TACTEC 310 9600 conversion

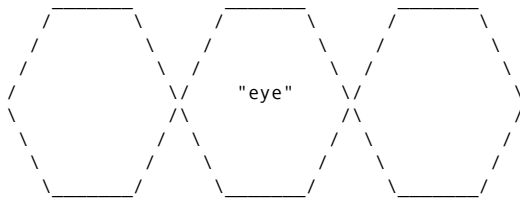
From: Robert Donnell <rdonnell@eskimo.com>
Date: Sat, 30 Mar 1996 04:38:20 -0800
To: netsig@tapr.org
Message-ID: <1.5.4b13.16.19960330123820.0a97fb8a@mail.eskimo.com>
Rendered body type: text/plain

At 08:10 PM 3/29/96 -0600, you wrote:
>the mods however don't seem to fly with my kantronics 9612 modem,
>where equalization occurs on the receive side of the tnc rather than
>on the transmit side. the 'jumpers' in the MFJ are mysterious and refer
>to 'waveforms' and the like and are not explicitly explained.
>
>i had hoped to 'copy' the txa conditioning that the MFJ does, but have
>no clue as to what it is.... the MANUAL say's to 'try different jumper
>settings until a good eye pattern is observed !'
>

Hi Frank,

The MFJ modem is a knockoff of the G3RUH 9600 baud modem. The modulator uses a digital-to-analog converter to generate the waveform. The information that's fed to the D/A converter is stored in an EPROM. The EPROM is large enough to hold several different versions of the waveform - 16 different ones, as I recall. This is what changing the jumpers changes - which version of the waveform is actually transmitted when the transmitter is keyed.

The idea of looking at the eye pattern is to be looking at the waveform on a good receiver or signal monitor, and "hopefully" create a scope pattern which has a large, empty area between the zero-crossing points. The more open and even the pattern, the lower the bit-error rate will be on the receiving side of things.



The diagram above (if you're looking with a fixed-width font size) gives a rough idea of what the waveform looks like, assuming that you're looking at a large number of repeats of the transmitted data, averaged by the persistence of the oscilloscope. That averaging will display the eye pattern, and the distortion to the waveform will be displayed as deviations from the 'perfect' pattern, and typically, by observing that the open area of the eye is not very large.

At this point the G3RUH modem design, used by MFJ, Kantronics in the Data Engine modem, and Pac Comm (as I recall) is the only one that provides for the user to be able to optimize the transmitted waveform. Others that use a lookup table for generating the waveform, but that don't (at this time) provide for optimizing the waveform under user control, include the TAPR 9600 baud modem kit, and AEA's DSP-1232 and DSP-2232. Many other designs use analog compensation, and is not normally incrementally adjustable by the user. I think that the analog compensation is most popular in 9600-baud manufactured TNCs because it is inexpensive and does not take a lot of circuit board space. The problem with the approach is that there is no standard for phase and frequency response in the radio transmitter and receiver - and we're not even close to having one. That's why you've gotten to face the challenge of adapting that radio for 9600 operations.

Hope that helps you understand what's what with 9600 baud TNCs.

73, Bob

 Bob Donnell, KD7NM bob@kd7nm.ampr.org rdonnell@eskimo.com
 Western Washington Amateur IP Address Coordinator (206) 775-3651

3. Re: [NETSIG:2382] Midland 13-509@9k6?

From: "Karl F. Larsen" <k5di@acca.nmsu.edu>
 Date: Sat, 30 Mar 1996 05:47:42 -0700
 To: netsig@tapr.org
 Message-ID: <199603301247.FAA22366@acca.nmsu.edu>
 Rendered body type: text/plain

At 08:15 PM 3/29/96 -0600, you wrote:
 >The eye pattern out of the discriminator on my two 13-509's looks
 >terrible and the 9600 baud reception is very poor. Has anyone on
 >this group had success using the 13-509's at 9k6?
 >73 de Jack
 >
 >

Jack, I am sure the "normal" tune-up procedure for the receiver 455 khz if will make the passband too narrow for 4800 bps data. What happens is the phase shift of the data through the if is not equal at every frequency.

To correct this try detuning slightly the 455 khz if while watching the eye pattern. When the 2 sine waves loose their flat tops and become sort of well defined, your wide enuf. Now check receiver sensitivity and see what damage you did. If it's still good your home free Jack.

If you have a spectrum analyser and swept oscillator you can do this same thing very easy. If you have those things, and I borrow them?...:-)

Karl F. Larsen ---- k5di@acca.nmsu.edu --- <http://rever.nmsu.edu/~k5di/> -->

4. Re: [NETSIG:2385] Re: Audio on TAPR

From: mwestfal@csci.csusb.edu (Michael Westfall)
 Date: Sat, 30 Mar 1996 09:20:09 -0800 (PST)
 To: netsig@tapr.org
 Message-ID: <199603301720.JAA15341@csci.csusb.edu>
 Rendered body type: text/plain

> I was going to try and listen, went to the trouble to download and install
 > the Real Audio software ... only to find out that it won't run on my 386.

What is "Real Audio" ?
Is there some advantage to using it instead of the more standard .au files?
Is there a player available for Linux?

73 de Mike, ax.25net: N6KUY@W6JBT.#SOCA.CA.USA.NA
 amprnet: n6kuy@n6kuy.ampr.org [44.18.0.49]
 internet : mwestfal@csci.csusb.edu
 web: http://orion.csci.csusb.edu:8080
 "Linux: The Gates of Hell shall not prevail."
GCS/M { -d+ p+ c++ l u++ e+(*) m++(-) s/+ !n-(---) h-- !f g+ w+ t++ r-(--) y+ }

5. Re: [NETSIG:2380] Audio on TAPR

From: "Gary L. Grebus" <glg@balrog.k8lt.ampr.org>
Date: Sat, 30 Mar 1996 13:12:42 -0500
To: wd5ivd@tapr.org
Cc: netsig@tapr.org
Message-ID: <m0u3581-0002HYC@k8lt.ampr.org>
Rendered body type: text/plain

Greg,

I've very much wanted to listen to the WA5VMS interview. However, the only systems I have online are UNIX boxes which are not supported by RealAudio.

Any chance of getting the audio in some non-proprietary format? (.gsm might be one choice) Or, is there a way to download the RealAudio file so I can take it offline to system which has an RA player?

73,

/gary
K8LT

Gary L. Grebus Home: glg@k8lt.ampr.org
Brookline, NH Work: grebus@zk3.dec.com
 Ham Packet: K8LT@WA1PHY.#EMA.MA.USA

6. Re: [NETSIG:2381] update: TACTEC 310 9600 conversion

From: Mike Curtis <wd6ehr@kaiwan009.kaiwan.com>
Date: Sat, 30 Mar 1996 17:29:10 -0800 (PST)
To: netsig@tapr.org
Message-ID: <199603310129.RAA27909@kaiwan009.kaiwan.com>
Rendered body type: text/plain

> the 'jumpers' in the MFJ are mysterious and refer
> to 'waveforms' and the like and are not explicitly explained.

> i had hoped to 'copy' the txa conditioning that the MFJ does, but have
> no clue as to what it is.... the MANUAL say's to 'try different jumper
> settings until a good eye pattern is observed !'

The MFJ 9600 baud modem is a g3ruh modem, manufactured by PacComm, which uses an FIR filter for the transmitter waveform. The EPROM has several filters for various radios. In the g3ruh manual, he offers to custom burn an EPROM if you take proper measurements for the transmitter/receiver pair you'll be using. (Your transmitter and the remote receiver). While this sounds like it's optimized for only one radio pair, in practice it works quite well.

-- mike

7. Re: [NETSIG:2385] Re: Audio on TAPR

From: rmackay@cycor.ca (Ron VE1AIC)
Date: Sat, 30 Mar 1996 23:36:30 -0400
To: netsig@tapr.org
Message-ID: <199603310336.XAA23217@bud.peinet.pe.ca>
Rendered body type: text/plain

>Well
>There's Hertz, and then there's not exactly.
>I was going to try and listen, went to the trouble to download and install
>the Real Audio software ... only to find out that it won't run on my 386.
>Shame on me for not having at least a Pentium 133.
>

>Is there going to be a transcription of it available somewhere?
>
> 73 de Sid N00BM Salina, Ks.

What version won't run on your 386? I have been running it for some time on my 386DX-33 with 8meg ram (Win95) no problem. Using version 1.0.0.
73 - Ron

8. Linux login time out

From: Pascal Montaigne <Pascal.Montaigne@FMS.host.org>
Date: Sun, 31 Mar 1996 06:01:39 +200
To: "'netsig'" <netsig@tapr.org>
Message-ID: <01BB1ECA.35FCAF00@fms.host.comnet.fr>
Rendered body type: text/plain

The default login time out is on Linux 60 s on Linux as on most Unix system. This is a little bit short for 1200 Baud radio links. I want to change it but I can't find the file where this is define. Can someone help?

73, Pascal

9. [NETSIG:2382] Midland 13-509@9k6? -Reply

From: Orville Beach <orv@micom.com>
Date: Sat, 30 Mar 1996 21:11:30 -0800
To: netsig@tapr.org
Message-ID: <s15e9e5b.002@micom.com>
Rendered body type: text/plain

>>> <n7oo@uugate.wa7slg.ampr.org> 03/29/96 06:15pm >>>

The eye pattern out of the discriminator on my two 13-509's looks terrible and the 9600 baud reception is very poor. Has anyone on this group had success using the 13-509's at 9k6?
73 de Jack

Jack, did you remove the capacitor to ground on the output of the discriminator? Removing it improves the frequency response of the radio.

FYI - we had good luck with 13-509's over very limited ranges; never did install them on hills. Seem to recall some decent BER's, using the original K9NG 9600 modems. But that was a long time ago.

If that doesn't help, let me know and I'll dust off my 13-509 notes. I have a whole list of improvements that can be done to a 13-509 to harden it for a hill (courtesy WB9MJN and KA6SOX, ca 1987..)

73 - Orv - wb6wey
orv@micom.com

10. Re: [NETSIG:2380] Audio on TAPR

From: mel@mo.net (Mel Whitten)
Date: Sun, 31 Mar 1996 21:00:57 -0600
To: netsig@tapr.org
Message-ID: <199604010308.VAA17764@Walden.MO.NET>
Rendered body type: text/plain

Yes, I thought the interview was excellent. I think the mic may have been a little close to Joe. Your (Gregs) audio was very clear, only a little lower in level while Joe's sounded a bit distorted but no difficulty in understanding every word.

Mel, K0PFX

>Has anyone had a chance too listen to the chat with Joe W5VMS on the TAPR >web page.

>

>Was wondering if people thought we should try to do more of that or not. >or if the content was good ?

>

>Cheers - Greg, WD5IVD

>

>

>

Mel Whitten, K0PFX

11. Re: [NETSIG:2382] Midland 13-509@9k6?

From: WB1DSW@aol.com
Date: Mon, 1 Apr 1996 08:03:51 -0500
To: netsig@tapr.org
Message-ID: <960401080350_502755399@emout06.mail.aol.com>
Rendered body type: text/plain

Jack, when and if you find out abt the MidLand, please send me a copy if you can.
Thanks.

12. Re: [NETSIG:2382] Midland 13-509@9k6?

From: crompton@nadc.nadc.navy.mil (D. Crompton)
Date: Mon, 1 Apr 1996 10:13:08 -0500
To: netsig@tapr.org
Message-ID: <199604011513.KAA12006@nadc.nadc.navy.mil>
Rendered body type: text/plain

Boy that's an oldie! I have one that I had used on packet (up to 2400) for many years. I made loads of mods to it to improve it's performance. If I remember the RX recovery time was not good and I kept most of the RX powered when in transmit. I also made changes in the RX and TX response but since you are coming right off of the disc. that should not matter.

I replaced the relay once and I suspect if you are going to use 9600 that the relay may be a problem.

Doug

13. Re: [NETSIG:2382] Midland 13-509@9k6?

From: Hank Oredson <Hank_Oredson@MENTORG.COM>
Date: Mon, 01 Apr 1996 09:56:30 -0800
To: netsig@tapr.org
Message-ID: <9604011758.AA16283@em-wv03.wv.mentorg.com>
Rendered body type: text/plain

At 08:15 PM 3/29/96 -0600, you wrote:
>The eye pattern out of the discriminator on my two 13-509's looks
>terrible and the 9600 baud reception is very poor. Has anyone on
>this group had success using the 13-509's at 9k6?

Just recently acquired a pair of 13-509 and plan to make various mods to them in an attempt to use them at 9600 baud. Will be awhile before anything happens though ... waiting on crystals ...

Any ideas most welcome!

Hank Oredson @ Mentor Graphics	Library Operations
Internet : hank_oredson@mentorg.com	"Parts 'R Us!"
Amateur Radio: W0RLI@W0RLI.OR.USA.NOAM	

14. Re: Midlands & Real Audio

From: "Dave Ewaldz" <dme@ingersoll.com>
Date: Mon, 1 Apr 1996 12:45:21 -6000
To: netsig@tapr.org
Message-ID: <199604011847.MAA13542@s3130.ingersoll.com>
Rendered body type: text/plain

n7oo@uugate.wa7slg.ampr.org wrote:

> The eye pattern out of the discriminator on my two 13-509's looks
> terrible and the 9600 baud reception is very poor. Has anyone on
> this group had success using the 13-509's at 9k6?
> 73 de Jack

CAPRA, the Chicago packet guys have been using Midlands on 220mhz at 9k6 for years now. The guy who did the conversions is Don, WB9MJN. I dont have his internet address handy, but his ax25 Pbbs address is wb9mjn@n9hsi.il.usa.noam. You can also contact Carl, K9VXW, President of Capra k9vxw@n9hsi.il.usa.noam. I am suprised Don hasn't popped in here yet and given his 2 cents on these rigs.
I may have his mod writeup at home still also. If I do, I'll post them.

RE: Real audio:

>Has anyone had a chance too listen to the chat with Joe WASVMS on the
>TAPR

Greg, I like it. I enjoyed listening to Joe's interview. Great
information. Keep 'em up.

Sid Ashen-Brenner <sashen@midusa.net> wrote:

> There's Hertz, and then there's not exactly.
> I was going to try and listen, went to the trouble to download and install
> the Real Audio software ... only to find out that it won't run on my 386.
> Shame on me for not having at least a Pentium 133.

Download the old version 1.0 of real audio on the real audio site.
Works well on my 386-40 at 14.4kb. Doesn't sound as nice as the newer
version, but it works on my "old" machine.

73 Dave N9HKM

--
Dave Ewaldz
The Ingersoll Milling Machine Co.
Rockford, Il. USA

Work
Ph : 815-987-6081
Fax: 815-987-6541
dme@ingersoll.com
Home
Ph : 815-633-7031
dewaldz@sinnfree.sinnfree.org

15. PLIP? anybody?

From: n8lbv@hamgate.merit.edu
Date: Thu, 04 Apr 96 14:03:47 EST
To: netsig@tapr.org
Message-ID: <10337@hamgate.merit.edu>
Rendered body type: text/plain

Hello! Steve here,

I'm not sure if this is the -proper- mailing list to post to, or if I should
be sending this to nos-bbs.

A----

The question: I have been trying (hard) to get JNOS (current version)
and several other versions going back a few letters)
to work with the PLIP (parallel port) packet driver between two machines.
I have tried many things! different machines (of all speeds) from 8088
to 586.

I know the hardware is good and properly configured.

I used laplink5 and dos interlnk /intersvr with no probs.

I also specified in LL% not to used the default (polled) and did specify the
same address/irq that I was using in JNOS.

in most cases this was 0x378 and irq7 for lpt on both computers.

if anyone can refer me to where I should be looking for answers here on
this matter that would be great!

I could go much farther in explaining what I tried and what I got but not
even sure if I am in the right place hihi.

Thank you very much for your time and reading this message!

Steve

N8lbv@hamgate.merit.edu or n8lbv@n8lbv.ampr.org

73!

16. TAPR Server Notice

From: Greg Jones <wd5ivd@tapr.org>
Date: Tue, 9 Apr 1996 18:05:07 -0500 (CDT)
To: tapr-bb@tapr.org (TAPR-BB mailing), hfsgsig@tapr.org (HF SIG mailing),
aprsssig@tapr.org (BBS SIG mailing), netsig@tapr.org (NETSIG mailing),
bbssig@tapr.org (BBS SIG mailing), tapr-tnc@tapr.org (tapr-tnc)
Message-ID: <199604092305.SAA05153@tapr.org>
Rendered body type: text/plain

The TAPR server will be physically relocated during the weekend
of 12 - 15 April. There may be times between now and Monday
night when the system will be unavailable.

Tucson Amateur Packet Radio

8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399 * 817-383-0000

e-mail: TAPR@TAPR.ORG ftp: ftp.tapr.org web: http://www.tapr.org/tapr

17. Re: [NETSIG:2389] Re: Audio on TAPR

From: Bob Nielsen <nielsen@primenet.com>
Date: Sat, 6 Apr 1996 18:16:49 -0700 (MST)
To: netsig@tapr.org
Message-ID: <Pine.LNX.3.91.960406181435.4134C-100000@nielsen.tus.primenet.com>
Rendered body type: text/plain

On Sat, 6 Apr 1996, Michael Westfall wrote:

> > I was going to try and listen, went to the trouble to download and install
> > the Real Audio software ... only to find out that it won't run on my 386.
>
>
> What is "Real Audio" ?
> Is there some advantage to using it instead of the more standard .au files?
> Is there a player available for Linux?

Real Audio will play as it is being received, rather than downloading a file and then running it through audio software. TrueSpeech is similar. Yes, you can get Real Audio for Linux, which works well with Netscape 2.0.

Bob

Bob Nielsen Internet: nielsen@primenet.com
Tucson, AZ AMPRnet: w6swe@w6swe.ampr.org
 AX.25: w6swe@wb7tts.az.usa.noam

18. Re: [NETSIG:2392] Re: Audio on TAPR

From: Bob Nielsen <nielsen@primenet.com>
Date: Sat, 6 Apr 1996 18:20:36 -0700 (MST)
To: netsig@tapr.org
Message-ID: <Pine.LNX.3.91.960406181929.4134D-100000@nielsen.tus.primenet.com>
Rendered body type: text/plain

On Sat, 6 Apr 1996, Ron VE1AIC wrote:

>
> >Well
> >There's Hertz, and then there's not exactly.
> >I was going to try and listen, went to the trouble to download and install
> >the Real Audio software ... only to find out that it won't run on my 386.
> >Shame on me for not having at least a Pentium 133.
> >
> >Is there going to be a transcription of it available somewhere?
> >
> > 73 de Sid N00BM Salina, Ks.
>
> What version won't run on your 386? I have been running it for some time on
> my 386DX-33 with 8meg ram (Win95) no problem. Using version 1.0.0.
> 73 - Ron
>
>

The 28.8 higher fidelity version probably won't run on a 386dx-33. It won't run on my 486slc2-66, either. The original form should do fine.

Bob

Bob Nielsen Internet: nielsen@primenet.com
Tucson, AZ AMPRnet: w6swe@w6swe.ampr.org
 AX.25: w6swe@wb7tts.az.usa.noam

19. Re: [NETSIG:2393] Linux login time out

From: pipe2@oeonline.com
Date: Sat, 6 Apr 96 22:23 EST
To: netsig@tapr.org
Message-ID: <m0u5l4m-000B0FC@oeonline.oeonline.com>
Rendered body type: text/plain

The timeout is part of the Telnet daemon, in.telnetd, and probably is going to need to be set in the source file for that daemon. You might try one of

in voltage follower configuration. (741's are lousy at 455 kHz :-) You may need a 455 kHz trap, too.

While I hear relays being badmouthed a lot, I personally have had minimal problems with them other than just normal wear and tear. Of course, PIN diode switching is a nice touch if you like it and certainly wouldn't hurt anything :-)

-- mike

22. ?? Midland 13-509 @ 9.6K

From: Thomas Mathewson <tommath@norwich.net>
Date: Sun, 07 Apr 1996 07:08:25 +0000
To: netsig@tapr.org
Cc: tommath@norwich.net
Message-ID: <316769E9.5CC5@norwich.net>
Rendered body type: text/plain

I have been reading with very much interest the msgs about the Midland 13-509 running at 9.6k baud. If anyone has a practical "How to Guide" to set up these radios I would appreciate a copy. I am not a "technoid", but I can follow directions. I also have a friend who has access to lots of test equipment that will probably do the work for me.

73 TOM
KA2MYD@KA2MYD.CNY.NY.USA.NA <--AX.25
tommath@norwich.net <-- internet

23. Re: [NETSIG:2400] PLIP? anybody?

From: "Karl F. Larsen" <k5di@acca.nmsu.edu>
Date: Sun, 7 Apr 1996 07:30:40 -0600
To: netsig@tapr.org
Message-ID: <199604071330.HAA26791@acca.nmsu.edu>
Rendered body type: text/plain

Steve, NOS does not support a PLIP connection. You can compile with a SLIP and PPP type of interface but never seen a PLIP and I just looked at the source code for JNOS 1.10m. It is possible that TNOS has a PLIP but I don't have that source code handy.

At 06:41 PM 4/6/96 -0600, you wrote:

>Hello! Steve here,

>

>I'm not sure if this is the -proper- mailing list to post to, or if I should

>be sending this to nos-bbs.

>A----

>The question: I have been trying (hard) to get JNOS (current version)

>and several other versions going back a few letters)

>to work with the PLIP (parallel port) packet driver between two machines.

>I have tried many things! different machines (of all speeds) from 8088

>to 586.

>I know the hardware is good and properly configured.

>I used laplink5 and dos interlnk /intersvr with no probs.

>I also specified in LL% not to use the default (polled) and did specify the)

>same address/irq that I was using in JNOS.

>in most cases this was 0x378 and irq7 for lpt on both computers.

>if anyone can refer me to where I should be looking for answers here on

>this matter that would be great!

>I could go much farther in explaining what I tried and what I got but not

>even sure if I am in the right place hihi.

>Thank you very much for your time and reading this message!

>Steve

>N81bv@hamgate.merit.edu or n81bv@n81bv.ampr.org

>73!

>

>

>

Karl F. Larsen ---- k5di@acca.nmsu.edu --- <http://rever.nmsu.edu/~k5di/> -->

24. Re: [NETSIG:2390] Re: Audio on TAPR

From: Barry McLarnon VE3JF <bm@hydra.carleton.ca>
Date: Sun, 7 Apr 1996 12:57:39 -0400 (EDT)
To: netsig@tapr.org
Message-ID: <199604071657.MAA01918@hydra.carleton.ca>
Rendered body type: text/plain

> I've very much wanted to listen to the WA5VMS interview. However, the only
> systems I have online are UNIX boxes which are not supported by RealAudio.

What flavor of UNIX are you running? To quote from
<http://www.realaudio.com/help/player/unixplayer2.0.html>:

The RealAudio Player is available for the following Unix systems:

Silicon Graphics IRIX 5.3 on an Indy, Indigo, or Challenge system
Sun Solaris 2.4 or later
Sun SunOS 4.1.X
Linux 1.2.X or later, on a Pentium system with a VoxWare (TASD) 3.0.1
or 3.5-beta1 sound driver

Works fine on my Linux box...

Barry

--
Barry McLarnon VE3JF/VA3TCP | Internet: bm@hydra.carleton.ca
Ottawa Amateur Radio Club | AMPRnet: bm@lynx.ve3jf.ampr.org
Packet Working Group | Web: <http://hydra.carleton.ca>

25. Re: [NETSIG:2393] Linux login time out

From: Paul Beltrani <beltrani@pixi.com>
Date: Sun, 7 Apr 1996 16:52:32 -1000 (HST)
To: netsig@tapr.org
Message-ID: <Pine.SUN.3.91.960407165001.10508A-100000@akamai.pixi.com>
Rendered body type: text/plain

On Sat, 6 Apr 1996, Pascal Montaigne wrote:

> The default login time out is on Linux 60 s on Linux as on most Unix
> system. This is a little bit short for 1200 Baud radio links. I want to
> change it but I can't find the file where this is define. Can someone help?

You can set how long the system will wait for a user name. Look in
your /etc/inittab file and see which process is monitoring your login
port. (Most likely "agetty"). Then, read the man page for that process
to find out what the parameter is to set the wait time. With agetty, it
is -t <# of seconds>.
- Paul, AH6NU

26. Real Audio for Linux, was ???

From: Paul Beltrani <beltrani@pixi.com>
Date: Sun, 7 Apr 1996 16:56:05 -1000 (HST)
To: netsig@tapr.org
Message-ID: <Pine.SUN.3.91.960407165245.10508B-100000@akamai.pixi.com>
Rendered body type: text/plain

Sorry, I no longer have the original posting but someone asked about RA
for Linux so they could hear the RA files at the TAPR home page.

Yes, there is a Real Audio client and Netscape for the X window system and
Linux. I use both at work. Check out the Netscape and RA home pages for
more info and copies of the clients. The RA client for Linux requires
the latest audio drivers, so you may want to get those too.

Netscape: <http://www.netscape.com>

RA: sri, can't remember the URL. If you can't find it, email me at
beltrani@pixi.com and I'll dig it up for you.

My home page has links to the Linux home page and info on kernel
updates. <http://www.pixi.com/~beltrani>

- Paul, AH6NU

27. Info on WA4SDY RF modems?

From: Paul Beltrani <beltrani@pixi.com>
Date: Sun, 7 Apr 1996 17:04:28 -1000 (HST)
To: netsig@tapr.org
Message-ID: <Pine.SUN.3.91.960407165701.10508C-100000@akamai.pixi.com>
Rendered body type: text/plain

We are in the process of bringing up some 56KBPS links using the
original (multi board) WA4DSY RF modem. We will begin by setting up
a full time link between two stations. Later, we would like to move to

a 56KBPS repeater.

1) We plan to use the 1.25cm band. Any suggestions for transverters to use with this modem?

2) Does anyone know what the interface panel looks like on the yet to be released PacComm single board version of the WA4DSY modem? I am interested in what types of connectors are used and what the pin-outs are so I can make our modems "plug compatible" with the new PacComm units when they are released.

PacComm has been advertising the redesigned WA4DSY RF modem with transverters for some time now. However, I called them a few weeks ago and was told they had not yet finalized on a PCB supplier and were not sure when they might be supplying transverters. The only info they sent me was a copy of their advertisement.

- Paul, AH6NU

28. (no subject)

From: Paul Beltrani <beltrani@pixi.com>
Date: Sun, 7 Apr 1996 17:07:49 -1000 (HST)
To: netsig@tapr.org
Message-ID: <Pine.SUN.3.91.960407170434.11175A-100000@akamai.pixi.com>
Rendered body type: text/plain

All of the other TCP/IP stations in my area are running some version of JNOS. Most of those machines are 386 based. I am running Linux 1.2.13 on a 386/25 with 13M of RAM as my main Amateur box.

I have noticed that when I try to connect to JNOS based stations through our 9600KBPS repeater, it takes ridiculously long to get a response. e.g. I initiate a telnet connection. With minimal traffic on the repeater, and apparently no retries it can take several minutes just to get a login prompt from the JNOS station. This response time is typical of all activity, not just establishing a telnet session. While doing some table top network experiments with Linux <-> JNOS systems I have also noticed what I consider to be excessive response times.

As I am the only one running a Linux box on the Amateur network, I don't have much to compare to. I do not have full duplex capability so I can not attempt to connect to myself through the repeater. (It is a bit regeneration system). However, I am reasonably sure that my RF link is good. Monitoring the frequency and CD LED on my modem leads me to believe my data is being sent properly and that I am hearing what is sent to me. I have checked my modem with a scope and everything is within spec.

I realize, despite its name, JNOS is not an operating system and can not multitask like Linux so I don't expect much. However, the performance is so poor that I don't think it is worth the effort to upgrade our network speed if the stations will not be able to take advantage of it.

Those of you who run Linux, is there anything you have done to optimize your operation through AX25 ports?

Those of you who run hi speed network nodes (>9600BPS), what OS do use and how would you rate its performance?

- Paul, AH6NU

29. Re: [NETSIG:2389] Re: Audio on TAPR

From: Robert Donnell <rdonnell@eskimo.com>
Date: Sun, 07 Apr 1996 19:21:11 -0700
To: netsig@tapr.org
Message-ID: <1.5.4b13.16.19960408022111.3fcf7b4a@mail.eskimo.com>
Rendered body type: text/plain

>
>What is "Real Audio" ?
>Is there some advantage to using it instead of the more standard .au files?
>Is there a player available for Linux?
>
>

RealAudio is a way of transferring live and recorded audio streams to a (or multiple) remote PCs. Yes, there's a player for Real Audio for linux on the site. I've downloaded it, but have not installed it yet - have to find a slot in the full-time linux box for a sound card, first.

My guess that the real advantages of it are that it doesn't take any space on your system - unless you download a file. It can be adequately driven with a (roughly) 9600 bps data path. It doesn't consume the entire output of a 14.4kbps modem, in that I was able to listen to an interview while still doing mail, or ftp, or news. Trying to do two other tasks did cause the throughput for the realaudio connection to drop to the point where dropouts were pretty severe. With the low throughput requirements, I'd bet the file sizes are a lot smaller than .au or .wav files, too.

73, Bob

Bob Donnell, KD7NM bob@kd7nm.ampr.org rdonnell@eskimo.com
Western Washington Amateur IP Address Coordinator (206) 775-3651

30. Re: [NETSIG:2412] Info on WA4SDY RF modems?

From: "Gwyn Reedy, W1BEL" <gwyn@paccomm.com>
Date: Thu, 11 Apr 1996 15:50:22 -0400 (EDT)
To: netsig@tapr.org
Cc: File <file@paccomm.com>
Message-ID: <Pine.LNX.3.91.960411152609.4873A-100000@paccomm>
Rendered body type: text/plain

On Thu, 11 Apr 1996, Paul Beltrani wrote:

> 2) Does anyone know what the interface panel looks like on the yet to
> be released PacComm single board version of the WA4DSY modem? I am
> interested in what types of connectors are used and what the pin-outs
> are so I can make our modems "plug compatible" with the new PacComm
> units when they are released.

Here is the information you have publicly requested - as best I can do it in a word picture. Diagrams are available via fax if you like.

Front Panel:

Power switch, RDY LED, PTT LED, DCD LED, 8 position rotary frequency selector (screwdriver adjust through the panel) and 10 Signal Level LEDs.

Rear Panel:

12 VDC coaxial power socket (center pin positive) 2.1 mm., Ground Post, push button to key xmtr for test, DA-15 data connector (RS-422), push button to trigger remote reset in remote modem (if optional relay is installed), Control and Power connector to Transverter - 5 pin DIN, Modem TX output to transverter - BNC, Modem RX input from transverter - BNC.

The 5 pin DIN pinout:

Pin 1 - PTT
Pin 2 - 1 of 2. Connects to pin 4 when remote control code is received.
Pin 3 - Ground
Pin 4 - See pin 2
Pin 5 - +12VDC to transverter

DA-15 pinout:

1. N/C
2. + Receive Clock (out)
3. + Receive Data (out)
4. + Transmit Clock (out)
5. + Carrier Detect (out, low true)
6. + Transmit Data (in)
7. + Request to Send (in, low true)
8. Mode Select (in, not used)
9. Ground
10. - Receive Clock (out)
11. - Receive Data (out)
12. - Transmit Clock (out)
13. - Carrier Detect (out, high true)
14. - Transmit Data (in)
15. - Request to Send (in, high true)

If your serial card or driver TNC does not support RS422, then CMOS levels can be provided at the DA-15. Use pins 1-9 as above and leave pins 10-15 disconnected.

> PacComm has been advertising the redesigned WA4SDY RF modem with
> transverters for some time now. However, I called them a few weeks ago
> and was told they had not yet finalized on a PCB supplier and were not
> sure when they might be supplying transverters. The only info they sent
> me was a copy of their advertisement.

We expect 100 printed circuits on April 17th. We will begin construction as soon as the pc boards are inspected, but not all parts are in hand, so I don't expect to ship before the end of April. We will definately ship prior to Dayton and will have numerous units for sale at Dayton.

I apologize for the delay in getting this fine product out the door. Our level of business is running 3x that of a year ago and we are struggling to grow that fast. The 56kb modem got delayed in the process.

I do not apologize for running an advert prior to the time the unit is available. We need to begin early to inform people that the product is going to be available, and anyway we expected to have it out by last January, but some urgent work related to the US deployment to Bosnia took precedence.

We offer two devices to interface to the DSY modem.
a) the SPIRIT-2 PAD, a 20 MHz Z-80 TNC to run KISS at the 56kb rate.
b) the Gracilis PackeTwin full duplex DMA HDLC card with RS-422.

As time permits, I'll provide information and support via this means. Telephone calls are less effective as not all sales personnel (i.e. phone answerers) have the full story on this new product.

We have not made arrangements (yet) to distribute any transverters.

Gwyn Reedy, WIBEL	gwyn@paccomm.com	wibel@amsat.org
AMRAD AMSAT ARRL FADCA QCWA TAPR SETI AFA AFCEA IEEE		
PacComm Packet Radio Systems, Inc.		voice: +813-874-2980
4413 N. Hesperides St.		fax: +813-872-8696
Tampa, FL 33614-7618		bbs: +813-874-3078
		URL: http://www.paccomm.com
Gwyn Reedy, President		ftp: ftp.paccomm.com
(Direct: +813-877-9900, mgr@paccomm.com)		

Design, manufacture, sales of digital communication equipment and systems

31. Re: [NETSIG:2408] Re: PLIP? anybody?

From: Bob Nielsen <nielsen@primenet.com>
Date: Thu, 11 Apr 1996 14:05:08 -0700 (MST)
To: netsig@tapr.org
Message-ID: <Pine.LNX.3.91.960411140053.755A-100000@nielsen.tus.primenet.com>
Rendered body type: text/plain

Karl, PLIP uses the FTP packet driver interface, so you would run plip.com (from the Crynwr packet driver collection) and use 'attach packet' with NOS.

Bob

On Thu, 11 Apr 1996, Karl F. Larsen wrote:

```
>
> Steve, NOS does not support a PLIP connection. You can compile with a SLIP
> and PPP type of interface but never seen a PLIP and I just looked at the
> source code for JNOS 1.10m. It is possible that TNOS has a PLIP but I don't
> have that source code handy.
>
>
> At 06:41 PM 4/6/96 -0600, you wrote:
> >Hello! Steve here,
> >
> >I'm not sure if this is the -proper- mailing list to post to, or if I should
> >be sending this to nos-bbs.
> >A---
> >The question: I have been trying (hard) to get JNOS (current version)
> >and several other versions going back a few letters)
> >to work with the PLIP (parallel port) packet driver between two machines.
> >I have tried many things! different machines (of all speeds) from 8088
> >to 586.
> >I know the hardware is good and properly configured.
> >I used laplink5 and dos interlnk /intersvr with no probs.
> >I also specified in LL% not to used the default (polled) and did specify the)
> >same address/irq that I was using in JNOS.
> >in most cases this was 0x378 and irq7 for lpt on both computers.
> >if anyone can refer me to where I should be looking for answers here on
> >this matter that would be great!
```

> >I could go much farther in explaining what I tried and what I got but not
> >even sure if I am in the right place hihi.
> >Thank you very much for your time and reading this message!
> >Steve
> >N8lbv@hamgate.merit.edu or n8lbv@n8lbv.ampr.org
> >73!
> >
> >
> >
> Karl F. Larsen ---- k5di@acca.nmsu.edu --- http://rever.nmsu.edu/~k5di/ -->
>
>

Bob Nielsen Internet: nielsen@primenet.com
Tucson, AZ AMPRnet: w6swe@w6swe.ampr.org
 AX.25: w6swe@wb7tls.az.usa.noam

32. Re: [NETSIG:2408] Re: PLIP? anybody?

From: mwestfal@csci.csusb.edu (Michael Westfall)
Date: Thu, 11 Apr 1996 18:11:44 -0700 (PDT)
To: netsig@tapr.org
Message-ID: <199604120111.SAA08388@csci.csusb.edu>
Rendered body type: text/plain

>
> Steve, NOS does not support a PLIP connection. You can compile with a SLIP
> and PPP type of interface but never seen a PLIP and I just looked at the
> source code for JNOS 1.10m. It is possible that TNOS has a PLIP but I don't
> have that source code handy.

Well, no, it's not built-in to JNOS.
That's why you need the PLIP packet driver to use it.
... and a version of NOS with packet driver support compiled in..

--

73 de Mike, ax.25net: N6KUY@W6JBT.#SOCA.CA.USA.NA
 amprnet: n6kuy@n6kuy.ampr.org [44.18.0.49]
 internet : mwestfal@csci.csusb.edu
 web: http://orion.csci.csusb.edu:8080
 "Linux: The Gates of Hell shall not prevail."
GCS/M { -d+ p+ c++ l u++ e+(*) m++(-) s/+ !n-(---) h-- !f g+ w+ t++ r-(--) y+ }

33. Re: [NETSIG:2409] Re: Audio on TAPR

From: "Gary L. Grebus" <glg@balrog.k8lt.ampr.org>
Date: Thu, 11 Apr 1996 22:09:11 -0400
To: netsig@tapr.org
Message-ID: <m0u7YIR-0002HMC@k8lt.ampr.org>
Rendered body type: text/plain

Hi Barry,

>What flavor of UNIX are you running?

FreeBSD and Linux at home and Digital UNIX at work. I have the Linux
RealAudio player, but that machine isn't conveniently put on the Interet. I
was hoping there was some trick for collecting the RealAudio file for playing
offline, but I haven't found one.

73,

/gary

34. RE: [NETSIG:2412] Info on WA4SDY RF modems?

From: Ron Curry <recurry@insighttec.com>
Date: Thu, 11 Apr 1996 19:54:49 -0700
To: "netsig@tapr.org" <netsig@tapr.org>
Message-ID: <01BB27E0.BEE5A820@expressp5.insighttec.com>
Rendered body type: text/plain

I'm also working on setting up some 56kb/s links.Gwen at Paccomm says they
will be ready "for sure" sometime in May. As far as transverters go,
DownEast Microwave has all the transverters you need for any band and the
seem real eager to help. It looks like I'll be going with as set of his but
I'll be using two of them to go full duplex.

Ron
KE6WED

From: Paul Beltrani[SMTP:beltrani@pixi.com]
Sent: Thursday, April 11, 1996 5:34 AM
To: netsig@tapr.org
Subject: [NETSIG:2412] Info on WA4SDY RF modems?

We are in the process of bringing up some 56KBPS links using the original (multi board) WA4DSY RF modem. We will begin by setting up a full time link between two stations. Later, we would like to move to a 56KBPS repeater.

1) We plan to use the 1.25cm band. Any suggestions for transverters to use with this modem?

2) Does anyone know what the interface panel looks like on the yet to be released PacComm single board version of the WA4DSY modem? I am interested in what types of connectors are used and what the pin-outs are so I can make our modems "plug compatible" with the new PacComm units when they are released.

PacComm has been advertising the redesigned WA4SDY RF modem with transverters for some time now. However, I called them a few weeks ago and was told they had not yet finalized on a PCB supplier and were not sure when they might be supplying transverters. The only info they sent me was a copy of their advertisement.

- Paul, AH6NU

35. (no subject)

From: Ron Curry <recurry@insighttec.com>
Date: (date unavailable)
Message-ID: <01BB27E1.E1615D80@expressp5.insighttec.com>
Rendered body type: text/plain
To: "'netsig@tapr.org'" <netsig@tapr.org>
Subject: RE: [NETSIG:2415] Re: Info on WA4SDY RF modems?
Date: Thu, 11 Apr 1996 20:02:57 -0700
Encoding: 107 TEXT, 94 UUENCODE
X-MS-Attachment: WINMAIL.DAT 0 00-00-1980 00:00

Gwyn,
I'd like two of them. Should I call and place an order? Please advise.

Thanks,
Ron Curry
ke6wed

From: Gwyn Reedy, W1BEL[SMTP:gwyn@paccomm.com]
Sent: Thursday, April 11, 1996 7:59 AM
To: netsig@tapr.org
Subject: [NETSIG:2415] Re: Info on WA4SDY RF modems?

On Thu, 11 Apr 1996, Paul Beltrani wrote:

> 2) Does anyone know what the interface panel looks like on the yet to
> be released PacComm single board version of the WA4DSY modem? I am
> interested in what types of connectors are used and what the pin-outs
> are so I can make our modems "plug compatible" with the new PacComm
> units when they are released.

Here is the information you have publicly requested - as best I can do it in a word picture. Diagrams are available via fax if you like.

Front Panel:
Power switch, RDY LED, PTT LED, DCD LED, 8 position rotary frequency selector (screwdriver adjust through the panel) and 10 Signal Level LEDs.

Rear Panel:
12 VDC coaxial power socket (center pin positive) 2.1 mm., Ground Post, push button to key xmtr for test, DA-15 data connector (RS-422), push button to trigger remote reset in remote modem (if optional relay is installed), Control and Power connector to Transverter - 5 pin DIN, Modem TX output to transverter - BNC, Modem RX input from transverter - BNC.

The 5 pin DIN pinout:
 Pin 1 - PTT
 Pin 2 - 1 of 2. Connects to pin 4 when remote control code is received.
 Pin 3 - Ground
 Pin 4 - See pin 2
 Pin 5 - +12VDC to transverter

DA-15 pinout:
 1. N/C
 2. + Receive Clock (out)
 3. + Receive Data (out)
 4. + Transmit Clock (out)
 5. + Carrier Detect (out, low true)
 6. + Transmit Data (in)
 7. + Request to Send (in, low true)
 8. Mode Select (in, not used)
 9. Ground
 10. - Receive Clock (out)
 11. - Receive Data (out)
 12. - Transmit Clock (out)
 13. - Carrier Detect (out, high true)
 14. - Transmit Data (in)
 15. - Request to Send (in, high true)

If your serial card or driver TNC does not support RS422, then CMOS levels can be provided at the DA-15. Use pins 1-9 as above and leave pins 10-15 disconnected.

> PacComm has been advertising the redesigned WA4SDY RF modem with
 > transverters for some time now. However, I called them a few weeks ago
 > and was told they had not yet finalized on a PCB supplier and were not
 > sure when they might be supplying transverters. The only info they sent
 > me was a copy of their advertisement.

We expect 100 printed circuits on April 17th. We will begin construction as soon as the pc boards are inspected, but not all parts are in hand, so I don't expect to ship before the end of April. We will definately ship prior to Dayton and will have numerous units for sale at Dayton.

I apologize for the delay in getting this fine product out the door. Our level of business is running 3x that of a year ago and we are struggling to grow that fast. The 56kb modem got delayed in the process.

I do not apologize for running an advert prior to the time the unit is available. We need to begin early to inform people that the product is going to be available, and anyway we expected to have it out by last January, but some urgent work related to the US deployment to Bosnia took precedence.

We offer two devices to interface to the DSY modem.
 a) the SPIRIT-2 PAD, a 20 MHz Z-80 TNC to run KISS at the 56kb rate.
 b) the Gracilis PackeTwin full duplex DMA HDLC card with RS-422.

As time permits, I'll provide information and support via this means. Telephone calls are less effective as not all sales personnel (i.e. phone answerers) have the full story on this new product.

We have not made arrangements (yet) to distribute any transverters.

Gwyn Reedy, WIBEL	gwyn@paccomm.com	wibel@amsat.org
AMRAD AMSAT ARRL FADCA QCWA TAPR SETI AFA AFCEA IEEE		

PacComm Packet Radio Systems, Inc.	voice: +813-874-2980
4413 N. Hesperides St.	fax: +813-872-8696
Tampa, FL 33614-7618	bbs: +813-874-3078

Gwyn Reedy, President	URL: http://www.paccomm.com
(Direct: +813-877-9900, mgr@paccomm.com)	ftp: ftp.paccomm.com

Design, manufacture, sales of digital communication equipment and systems

```
begin 600 WINMAIL.DAT
M>)\^(CH#`0:0" ` $` ``````!``$`0>0!@` (````Y 0` ``````#H`$-@ 0`
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M`\$\$\$4TU44`\$\$\$>`!\\,`0`\$\$\$!<`\$\$\$!R96-U<G)Y0&EN<VEG:'1T96,N
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M`\$\$\$`0D0`0`\$\$\$`\$,`\$\$\$#`\$\$\$A8`\$Q:1G5Q*45U_P`\*`0`%0*H!>L"@P!0
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M`0J`",\\)V30Q@`H-34"@ J!#;\$+8.!N9\$P,Q10`PH4404+\\F,`0`"!`=WEN
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MT"<S03/3+*!081U`(\$096QT<@!P:2!W!2;2.B L/B R\*2#8(\$10!Y\$`<'D"
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M2V`=45N3\$8`T*I`2R)S)!P!6EZ3+\$A\\6+04/Q#0KS&`!N@E0B7:*J00]&
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ML0J%2V\$)P*."CTB`25`3P->D-39K*^#`\_@#3/`5`\\C-1E%2C`V`>8/\\\$!\$!SP
MN4UAPN3#\\20W1@.1`\\<DZ\_A(PLP32,):XH&Y9\*?\_W\\,XH,VR`&#09`+18`%+
M87M>5!X@98#03:`W\\\_X%]!/`_@<C/^`>C!)=DF`R@<%)`L?`_0`%0`^6`=-`64
M7U-B`?1B7F);P!G@84\$YE4JPL`7_`;'D9,0#(C!^@&>180&=\$`>!8@P52,)5
MOD#JD!G0;`9YV])>4D)K4/=P8M!+8/]\*(.N(DX`JD&R@([`=1R`_\\Y0>G<
M4>J0`]'#^<0:D228W`J5/9X0&84<P2,)34"!`4DE4+7/P4\$\$/`:=%BT\$+@J2!(
M>B!:`BTDL+052V`W02!+27Y30D!(E?QC17`8X(O&8G\\8A`>0+=#IT%WA3.%F
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MD/M;`<TQ)^420\\1>2W!20-9?94+50\\PPL+'^MU1,87#^:\$?B57)39\$QP]N`J
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M2,(>PPV0NV#`VI%`PEWA69+SY1/O[86J47]6X),1LK&PL`Z`V]!+:(`C`2R\$8
M@16!VZ!^07DAPF(&D?06^CF57S2?-:\\VOS?/.!+Q-"5`'=WG24+=0\$X`D6!7
M,4)%3%`!`J=G]3FA0#108UA!`=U!803JJ946P,0H`;\$!D(4B0+LV[8&?P!M\\0
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end

AMC aircraft to get world-wide e-mail capabilities

SCOTT AIR FORCE BASE, Ill. (AFNS) -- The Air Mobility Command will reap the benefits of a recent \$6 million contract awarded to Landsea Systems, Inc., to buy L-Band satellite communications equipment. The L-Band equipment and spares will be used to equip 309 AMC C-5, C-141, and KC-10 aircraft with the capability to send and receive "e-mail" to and from the Tanker Airlift Control Center here to aircraft anywhere in the world. "The current method of high frequency radio communications is unreliable in certain areas in the world," said Maj. Steven Herring, deputy chief, AMC's Systems and Technology Branch. The L-band satellite is a commercial International Maritime Satellite constellation that has nearly 100 percent worldwide continuous coverage. L-Band refers to the particular communication frequency band used between the satellites and the aircraft and ground stations. The INMARSAT satellites provide a low-rate, store and forward messaging capability. This particular satellite system was chosen because of its flexibility, low cost and ability to meet increased AMC command and control and administrative communications requirements. The increased requirements were brought about by the end of the Cold War and the corresponding shift from a posture focused on Europe to a contingency and humanitarian mission that must operate anywhere in the world at any time.

In the TACC, from which all AMC aircraft are controlled, controllers will be able to communicate with the aircraft using their regular office e-mail system. AMC deployed command and control organizations, such as tanker airlift control elements, will also be able to communicate with the aircraft using this capability. The first installations are scheduled to begin in May, and the contract is to be completed by May 1998. The C-141 and C-5 programs will install L-Band using four to five contract field installation teams at the various bases. The KC-10 program will install four L-Band aircraft per month during routine periodic depot maintenance. "This program can be accomplished quickly and for a relatively low cost using existing off-the-shelf commercially available components," said Herring. Other AMC aircraft, such as C-17 and KC-135, are being evaluated as potential follow-on L-Band installation candidates in the future. (Courtesy of the AMC News Service)

--
Steve, N50WK

39. Re: [NETSIG:2413]

From: Frank Paxton III <paxton@sound.net>
Date: Fri, 12 Apr 1996 09:52:25 -0500
To: netsig@tapr.org
Message-ID: <316E6E29.B28@sound.net>
Rendered body type: text/plain

Paul :

here's my experience. take it with a grain of salt.

- 1> jnos is VERY fast. i operate a 9600 baud datarepeater that is also a jnos node running under DOS. it handles multiple streams <simultaneously running NETROM, ax25 and tcpip>. the 'hot' setup in the nos world now seems to be TNOS running under Linux.
- 2> i have jnos running under Linux on my home machine. it's great. i 'slip' connect to jnos in my OWN MACHINE...i have routing working and everything.
- 3> my guess is that you're running Linux with an ax25 driver. i've had friends that tried that. it works but here is the problem:
 - a. Linux is NOT optimized for radio traffic. it has LOTS of extra 'overhead'. also, it usually echo's remotely like all the 'twisted pair' stuff. and finally, it will often TIME OUT before making connections because the time out timer is MUCH shorter for hardwire than what you might need for 'radio.'

i hope what i've said here is NOT TOTALLY ABSURD or OBSOLETE. better check around and see what others say.

frank . ng0n.

40. RE: [NETSIG:2424] Re:

From: Ron Curry <recurry@insighttec.com>
Date: Fri, 12 Apr 1996 11:00:36 -0700
To: "netsig@tapr.org" <netsig@tapr.org>
Message-ID: <01BB285F.47C02700@expressp5.insighttec.com>
Rendered body type: text/plain

Some of what you say is absurd. I fail to see what "overhead" you are bypassing by running an additional tcp/ip stack through a virtual slip link on top of Linux. There may be some advantages in functionality by running TNOS on top of Linux but reduced overhead is not one of them. Certainly, no amount of "overhead" will slow a dead slow 1200 or 9600 baud link unless you are running a 16 mHz 386sx or something. Please explain the "LOTS" of extra overhead could be something I've missed.

The ax25 stuff works very well in Linux. The ax25 stack in Linux IS "optimized" for RF because that's exactly what it was written for - ask Alan Cox. It's very configurable and we routinely get >400cps ftp transfers over a 40mile 9600 baud link between a Linux box and a JNOS box and >600cps on a similar 20mile link. The only limiting factor is quality of RF links.

Remote echo is only a downside on SLOW links like 1200 baud but is of course an option for all the Linux commands - why don't you put it into line mode or local echo? Telnet, ftp, etc., etc., all support this.

All "timeouts" in UNIX/Linux are configurable. What "timeout" timer are you referring to?

This is a classic case of propagating incorrect second hand information. It might be more appropriate to say "I've had friends who tried Linux but they were not able to configure it properly"

Ron Curry
ke6wed

From: Frank Paxton III[SMTP:paxton@sound.net]
Sent: Friday, April 12, 1996 3:01 AM
To: netsig@tapr.org
Subject: [NETSIG:2424] Re:

Paul :

here's my experience. take it with a grain of salt.

- 1> jnos is VERY fast. i operate a 9600 baud datarepeater that is also a jnos node running under DOS. it handles multiple streams <simultaneously running NETROM, ax25 and tcpip>. the 'hot' setup in the nos world now seems to be TNOS running under Linux.
- 2> i have jnos running under Linux on my home machine. it's great. i 'slip' connect to jnos in my OWN MACHINE...i have routing working and everything.
- 3> my guess is that you're running Linux with an ax25 driver. i've had friends that tried that. it works but here is the problem:
 - a. Linux is NOT optimized for radio traffic. it has LOTS of extra 'overhead'. also, it usually echo's remotely like all the 'twisted pair' stuff. and finally, it will often TIME OUT before making connections because the time out timer is MUCH shorter for hardwire than what you might need for 'radio.'

i hope what i've said here is NOT TOTALLY ABSURD or OBSOLETE. better check around and see what others say.

frank . ng0n.

41. Compiled JNOS110M (Help)

From: Bret Mills <bmills@egate.main.ehs.emery.k12.ut.us>
Date: Fri, 12 Apr 1996 17:01:05 -0600
To: netsig@tapr.org
Message-ID: <316EE0B1.4EC5@egate.main.ehs.emery.k12.ut.us>
Rendered body type: text/plain

Hello guy's I run the Gateway here in eastern Utah, U.S.A. (egate.nc7f.ampr.org) and I would like to upgrade to version JNOS110M, The problem I don't have a Compiler to make a copy of JNOS110M with all the things I would like in it so I was wondering if anyone has a Compiled file that has most of the following moduals.
WEB server code
Dial Up code
Eather Net Code
Convers Code
Mail Server Code
and any others that may be handy and fun to have.

I'm running 1 ether Net port to connect to the internet, 1 radio ports
and I hope to add a modem (if it's possible) for a dial up port well
thanks alot.
Well 73's and thanks in advanced Bret Mills WX7Y

42. Plip? | more

From: Steve Gladden <n8lbv@n8lbv.ampr.org>
Date: Sun, 14 Apr 1996 15:19:18 -0400
To: "'netsig@tapr.org'" <netsig@tapr.org>
Message-ID: <01BB2A16.0F25C040@Work1.n8lbv.ampr.org>
Rendered body type: text/plain

Here is a copy of the original question and the replies that have come
in so far:

>Hello! Steve here,

>

>I'm not sure if this is the -proper- mailing list to post to, or if I should
>be sending this to nos-bbs.

>The question: I have been trying (hard) to get JNOS (current version)
>and several other versions going back a few letters)
>to work with the PLIP (parallel port) packet driver between two machines.
>I have tried many things! different machines (of all speeds) from 8088
>to 586.
>I know the hardware is good and properly configured.
>I used laplink5 and dos interlnk /intersvr with no probs.
>I also specified in LL5 not to use the default (polled) and did specify the)
>same address/irq that I was using in JNOS.
>in most cases this was 0x378 and irq7 for lpt on both computers.
>if anyone can refer me to where I should be looking for answers here on
>this matter that would be great!
>I could go much farther in explaining what I tried and what I got but not
>even sure if I am in the right place hihi.
>Thank you very much for your time and reading this message!
>Steve
>N8lbv@hamgate.merit.edu or n8lbv@n8lbv.ampr.org
>73!

The replies so far.

{
Steve, NOS does not support a PLIP connection. You can compile with a SLIP
and PPP type of interface but never seen a PLIP and I just looked at the
source code for JNOS 1.10m. It is possible that TNOS has a PLIP but I don't
have that source code handy.

Karl F. Larsen ---- k5di@acca.nmsu.edu --- <http://rever.nmsu.edu/~k5di/> -->
}

{
Steve, NOS does not support a PLIP connection. You can compile with a SLIP
> and PPP type of interface but never seen a PLIP and I just looked at the
> source code for JNOS 1.10m. It is possible that TNOS has a PLIP but I don't
> have that source code handy.

Well, no, it's not built-in to JNOS.
That's why you need the PLIP packet driver to use it.
.. and a version of NOS with packet driver support compiled in..

--

73 de Mike, ax.25net: N6KUY@W6JBT.#SOCA.CA.USA.NA
 amprnet: n6kuy@n6kuy.ampr.org [44.18.0.49]
 internet : mwestfal@csci.csusb.edu
 web: http://orion.csci.csusb.edu:8080
 "Linux: The Gates of Hell shall not prevail."
GCS/M { -d+ p+ c++ l u++ e+(*) m++(-) s/+ !n-(---) h-- !f g+ w+ t++ r-(--) y+ }

}

{
Steve, NOS does not support a PLIP connection. You can compile with a SLIP
and PPP type of interface but never seen a PLIP and I just looked at the
source code for JNOS 1.10m. It is possible that TNOS has a PLIP but I don't

have that source code handy.

```
Karl F. Larsen ---- k5di@acca.nmsu.edu --- http://rever.nmsu.edu/~k5di/ -->
}
```

Okay Thanks very much for the quick response to the question!
sorry if I was unclear as to that I have been using the PACKET DRIVER
for plip and have had no success getting it to work.
I have no problems using other devices that require PACKET DRIVERS
(slip and ethernet) .
Just wondering if anyone else has EVER TRIED THIS? or knows of someone who may have.
Ive really tried hard to get this working and stuck! ouch!
It would be really slick to be able to link nos boxxes this way! much faster than serial port too.
although good ether cards are down to around 30 bucks now HIHI.
most nos boxxes already have that parellel port just sitting there begging to be used!
Thank you all for responding to this question take care!
73!
N81bv@n81bv.ampr.org

43. Re: [NETSIG:2424] Re:

From: John Gubernard <jtg@intac.com>
Date: Sat, 13 Apr 1996 22:54:07 -0400 (EDT)
To: netsig@tapr.org
Message-ID: <199604140254.WAA28767@mailhost.intac.com>
Rendered body type: text/plain

My name is John D. Gubernard, N2JSH. I am writing this message on behalf of
John T. Gubernard, K2LSX, who was my father. John T. Gubernard passed away
on April 7, 1996. If you have any immediate needs for additional assistance,
please contact me at this address for further information.

Regretfully,

John D. Gubernard
N2JSH
--

```
+-----+-----+
| John T. Gubernard, K2LSX      |Windows isn't a virus, viruses do something|
| Internet: jtg@intac.com      |          LINUX          |
| Amprnet : k2lsx@k2lsx.ampr.org | is an Operating System that does a lot |
| AX25 BBS: k2lsx@k2bjg.NJ.USA.NA|          |
+-----+-----+
```

44. Re: [NETSIG:2425] Re:

From: John Gubernard <jtg@intac.com>
Date: Sat, 13 Apr 1996 22:50:38 -0400 (EDT)
To: netsig@tapr.org
Message-ID: <199604140250.WAA28633@mailhost.intac.com>
Rendered body type: text/plain

My name is John D. Gubernard, N2JSH. I am replying to your message in order to inform you that my
father, John T. Gubernard (K2LSX) has passed away on April 7, 1996. If you have questions regarding any
affairs that my father might have involved in, please contact me at this e-mail address and I will try
to help you
to the best of my ability.

--

Regretfully,
John D. Gubernard, N2JSH

```
+-----+-----+
| John T. Gubernard, K2LSX      |Windows isn't a virus, viruses do something|
| Internet: jtg@intac.com      |          LINUX          |
| Amprnet : k2lsx@k2lsx.ampr.org | is an Operating System that does a lot |
| AX25 BBS: k2lsx@k2bjg.NJ.USA.NA|          |
+-----+-----+
```

45. Re: [NETSIG:2413]

From: "Karl F. Larsen" <k5di@acca.nmsu.edu>
Date: Sun, 14 Apr 1996 09:34:13 -0600
To: netsig@tapr.org
Message-ID: <199604141534.JAA28252@acca.nmsu.edu>
Rendered body type: text/plain

Paul, like Linux, JNOS requires setup that is far from trivial. When
set up properly JNOS is very fast. I deal with a JNOS system on the internet
and it sends me stuff at 65kb/s which is a dos limitation I think, but
plenty fast for any ham radio link.

I too run linux and it is very easy to make an error in that setup as well. If the JNOS guys are a local telephone call I suggest you talk with them and see if you can isolate the problem. If the JNOS guys have not set maxwait then they can be VERY slow because they are waiting forever for another packet from you. If it seems to be this as a problem I will send you the exact lines the JNOS guys need to add to there autoexec.nos files.

73, karl k5di

At 12:37 PM 4/11/96 -0500, you wrote:

>All of the other TCP/IP stations in my area are running some version of
>JNOS. Most of those machines are 386 based. I am running Linux 1.2.13
>on a 386/25 with 13M of RAM as my main Amateur box.
>

>I have noticed that when I try to connect to JNOS based stations through
>our 9600KBPS repeater, it takes ridiculously long to get a response.

Karl F. Larsen ---- k5di@acca.nmsu.edu --- <http://rever.nmsu.edu/~k5di/> -->

46. Re: [NETSIG:2415] Re: Info on WA4SDY RF modems?

From: Paul Beltrani <beltrani@pixi.com>
Date: Sat, 13 Apr 1996 17:01:58 -1000 (HST)
To: netsig@tapr.org
Message-ID: <Pine.SUN.3.91.960413170025.23378B-100000@akamai.pixi.com>
Rendered body type: text/plain

Gwyn Reedy wrote:

>Here is the information you have publicly requested - as best I can do
it
>in a word picture. Diagrams are available via fax if you like.
>

Thanks. That is exactly what I was looking for.

>I apologize for the delay in getting this fine product out the door. Our
>level of business is running 3x that of a year ago and we are struggling
>to grow that fast. The 56kb modem got delayed in the process.
>

>I do not apologize for running an advert prior to the time the unit is
>available. We need to begin early to inform people that the product is
>going to be available, and anyway we expected to have it out by last

I hope I didn't give the impression that I was complaining about prerelease advertising. It is exactly because of your add that I knew to seek some info so I can set up my current system to seamlessly use the new equipment when it becomes available.

Thanks again.
- Paul

47. KISS ROM and DCD

From: John Ackermann <jra@ag9v.febo.com>
Date: Sun, 14 Apr 1996 13:29:34 -0400
To: netsig@tapr.org.febo.com
Message-ID: <199604141729.NAA04915@ag9v.ampr.org>
Rendered body type: text/plain

Just discovered a strange problem that may explain some of the retries on our repeater.

We have several stations that are using TNC-2 clones with the KISS56 eprom. KISS56 is the speeded-up version of standard KISS that was designed to work with the GRAPES 56kbps modem. We're using 10MHz clock speed TNC-2s with this ROM and get very good performance driving 19.2kbps radios.

However, it looks like this code is ignoring DCD and transmitting whenever it wants to. In our setup, DCD comes from the radio, and the DCD light on the TNC comes up whenever data is present, but that doesn't inhibit transmit. We have systems using both TNOS and G8BPQ which exhibit the same behavior, so I think it's a problem in the TNC, not the system software.

We've tried issuing the parameter command to force the TNC into half-duplex mode, but that doesn't help. A look through the source code for KISS56 shows several references to the DCD signal, and does not indicate a full-duplex option even existing.

Anyone have any experience with this code, or have any ideas what might be going on?

John

PS -- if you reply to this message, please check the reply header... my mailer is doing very strange things at the moment and may have appended an erroneous "febo.com" to the end of any and all addresses.

48. TAPR.ORG Status

From: Greg Jones <wd5ivd@tapr.org>
Date: Tue, 16 Apr 1996 19:38:19 -0500 (CDT)
To: tapr-bb@tapr.org (TAPR-BB mailing), aprssig@tapr.org (BBS SIG mailing),
netsig@tapr.org (NETSIG mailing), bbssig@tapr.org (BBS SIG mailing),
hfsig@tapr.org (HF SIG mailing), dsp-93@tapr.org (DSP-93 Build),
das@tapr.org (das), tapr-tnc@tapr.org (tapr-tnc)
Message-ID: <199604170038.TAA13797@tapr.org>
Rendered body type: text/plain

As your e-mail boxes show, TAPR.ORG is again connected to the net. DataRace, our hosts, relocated their offices this weekend which caused the system outage. While TAPR.ORG was only down for a short time, without the connection to the service provider it was hard to service connections.

If you sent mail during the weekend, there is a good chance that your mail provider held your message and sent it when our connection was reestablished. If you don't see your e-mail then just send it again.

There will be some additional small outages during the week as the MIS folks at DataRace clean up the connection and move wires around.

Thanks for everyone patients during this down time.

Cheers - Greg, WD5IVD

49. Re: [NETSIG:2423] On Changing to Directed Networks

From: "Richard M. Bender, Univ of Pittsburgh" <RICK@vms.cis.pitt.edu>
Date: Sat, 13 Apr 1996 21:36:16 -0400 (EDT)
To: netsig@tapr.org
Message-ID: <01I3IAEPNZ8I9EDMQH@vms.cis.pitt.edu>
Rendered body type: text/plain
exit

50. Re: [NETSIG:2425] Re:

From: Frank Paxton III <paxton@sound.net>
Date: Fri, 12 Apr 1996 18:50:45 -0500
To: netsig@tapr.org
Message-ID: <316EEC55.1EED@sound.net>
Rendered body type: text/plain

Ron Curry wrote:

>
> Some of what you say is absurd. I fail to see what "overhead" you are
> bypassing by running an additional tcp/ip stack through a virtual slip link
> on top of Linux. There may be some advantages in functionality by running
> TNOS on top of Linux but reduced overhead is not one of them. Certainly, no
> amount of "overhead" will slow a dead slow 1200 or 9600 baud link unless
> you are running a 16 mHz 386sx or something. Please explain the "LOTS" of
> extra overhead could be something I've missed.
>

i was running a 386sx16 with 4 megs of ram at the time. this occured 2 years ago.
it was my impression that LINUX running the ax25 driver was 'verbose' in it's interaction
with other nodes... there seemed to be a lot of 'unnecessary' chitchat going back and forth.
it was the remote echo that was slowing everything down so much. that's why i mention
it in my note.

> The ax25 stuff works very well in Linux. The ax25 stack in Linux IS
> "optimized" for RF because that's exactly what it was written for - ask
> Alan Cox. It's very configurable and we routinely get >400cps ftp transfers
> over a 40mile 9600 baud link between a Linux box and a JNOS box and >600cps
> on a similar 20mile link. The only limiting factor is quality of RF links.
>

we're getting that kind of performance out of my old 386sx16 with 2 megs of ram running DOS
(now at a remote installation - repeater site) and JNOS.

> Remote echo is only a downside on SLOW links like 1200 baud but is of
> course an option for all the Linux commands - why don't you put it into
> line mode or local echo? Telnet, ftp, etc., etc., all support this.
>

yes. i WAS running 1200 baud at the time AND going thru a node as well.

> All "timeouts" in UNIX/Linux are configurable. What "timeout" timer are you
> referring to?
>

the 60 second connect timeout. 60 seconds seemed like it should have been plenty long enuf.
but, i got timed out a LOT so we just quit.

> This is a classic case of propagating incorrect second hand information. It
> might be more appropriate to say "I've had friends who tried Linux but they
> were not able to configure it properly"
>

another good point ron. sorry if i misled anyone. i think i'll leave NETSIG to you 'experts' !

ng0n. frank paxton.

51. Re: Linux vs JNOS on a junker

From: "S. Sampson" <ssampson@telepath.com>
Date: Wed, 17 Apr 1996 06:26:38 -0500
To: netsig@tapr.org
Message-ID: <3174D56E.5B1F@telepath.com>
Rendered body type: text/plain

Repeat, guess my original timed out during downtime:

Ron Curry wrote:

>
> The ax25 stuff works very well in Linux.

Define "Linux." "Works Very Well" is a version specific claim. I stopped
using the Linux AX.25 because it was failure prone. I will return to it
when Linux Version 1.4 comes out. (Odd numbers "1.3x" are hacks, even numbers
are releases). The last version I tried had intermittent segmentation
violations during telnet or ftp.

I agree though, that Linux should be a popular choice. Rather than put all your
code in one bag, like the (insert your prefix here)NOS monoliths, the programs
are Process Based, and multitasked.

It's not ready for prime time however. The best thing going today, is the
JNOS in a junker, with a real operating system connected to it via Ethernet.
I'm currently running JNOS in an old 486 junker with an ethernet to a Win95 box.
One of the new gadgets in town, is the NWS data feed on 169.025 MHz. I use one
port for IP, and the other for NWS data.

I did find in my experience, that the PC Bus cards worked much better than the
TNC as far as sustained throughput. There is an overhead in one computer talking
to another computer (well a Z-80) over a serial wire. Why Kantronics doesn't
throw in a 10Base-T or thin net interface instead of a serial port at this late
date, is a puzzle. (or any other TNC manufacturer). I'd spend the additional
few dollars...

--
Steve, N5OWK
"Flat Tax is out, Inflation is in"

52. Re:

From: Robert Donnell <rdonnell@eskimo.com>
Date: Wed, 17 Apr 1996 05:19:50 -0700
To: netsig@tapr.org
Message-ID: <1.5.4b13.16.19960417121950.37b74bb6@mail.eskimo.com>
Rendered body type: text/plain

At 12:37 PM 4/11/96 -0500, you wrote:

>All of the other TCP/IP stations in my area are running some version of
>JNOS. Most of those machines are 386 based. I am running Linux 1.2.13
>on a 386/25 with 13M of RAM as my main Amateur box.
>

>I have noticed that when I try to connect to JNOS based stations through
>our 9600KBPS repeater, it takes ridiculously long to get a response.
>e.g. I initiate a telnet connection. With minimal traffic on the
>repeater, and apparently no retries it can take several minutes just to
>get a login prompt from the JNOS station. This response time is typical
>of all activity, not just establishing a telnet session. While doing
>some table top network experiments with Linux <-> JNOS systems I have
>also noticed what I consider to be excessive response times.

>

Normally I get a response back from other JNOS systems I that I can reach locally via 9600 baud full-duplex repeaters within 2 seconds.

Sounds like you might need to run some ping tests with some of these stations. Perhaps you're not getting into or receiving the repeater as well as you beleive. This will help you find out. Since you're not on a wired fast network, make sure you use the -i parameter to space out your ping packets. Also, test with larger than standard packet sizes (64 bytes) - this will help determine if you're suffering from a high bit-error rate.

Also, if you're using one of the common TNC types, the CON and STA LEDs will indicate reception and transmission of packets over the RS-232 link to the computer. If you're seeing the DCD indicator come on, without then seeing the CON indicator blink (usually it's the CON indicator) then that was a packet transmission your TNC didn't decode, so you didn't receive. Large multi-frame transmissions should cause the CON LED to blink several times, once per frame, as they are transfered to the computer.

Hope this helps!

73, Bob

Bob Donnell, KD7NM bob@kd7nm.ampr.org rdonnell@eskimo.com
Western Washington Amateur IP Address Coordinator (206) 775-3651

53. Re: [NETSIG:2436] Re: Linux vs JNOS on a junker

From: crompton@nadc.nadc.navy.mil (D. Crompton)
Date: Wed, 17 Apr 1996 13:26:08 -0400
To: netsig@tapr.org
Message-ID: <199604171726.NAA01150@nadc.nadc.navy.mil>
Rendered body type: text/plain

>The best thing going today, is the
>JNOS in a junker, with a real operating system connected to it via Ethernet.
>I'm currently running JNOS in an old 486 junker with an ethernet to a Win95 box.

Or a Linux box - I have been saying this for years! A JNOS "radio front-end" to interface to the TNC's and a more capable box, ethernet connected, doing the fancy client (and some server) stuff.

Doug

54. Re: [NETSIG:2425] Re:

From: "S. Sampson" <ssampson@telepath.com>
Date: Fri, 12 Apr 1996 20:48:36 -0500
To: netsig@tapr.org
Message-ID: <316F07F4.2F14@telepath.com>
Rendered body type: text/plain

Ron Curry wrote:

>

> The ax25 stuff works very well in Linux.

Define "Linux." "Works Very Well" is a version specific claim. I stopped using the Linux AX.25 because it was failure prone. I will return to it when Linux Version 1.4 comes out. (Odd numbers "1.3x" are hacks, even numbers are releases).

I agree though, that Linux should be a popular choice. Rather than put all your code in one bag, like the (insert your prefix here)NOS monoliths, the programs are Process Based, and multitasked.

It's not ready for prime time however. The best thing going today, is the JNOS in a junker, with a real operating system connected to it via Ethernet.

I did find in my experiance, that the PC Bus cards worked much better than the TNC as far as sustained throughput. There is an overhead in one computer talking to another computer (well a Z-80) over a serial wire. Why Kantronics doesn't throw in a 10Base-T or thin net interface instead of a serial port at this late date, is a puzzle. (or any other TNC manufacturer).

--

Steve, N5OWK

"Flat Tax is out, Inflation is in"

55. Re: [NETSIG:2430] Re:

From: Hank Oredson <Hank_Oredson@MENTORG.COM>
Date: Wed, 17 Apr 1996 09:40:10 -0800
To: netsig@tapr.org
Message-ID: <9604171642.AA03974@em-wv03.wv.mentorg.com>
Rendered body type: text/plain

At 06:36 PM 4/16/96 -0500, you wrote:
> Paul, like Linux, JNOS requires setup that is far from trivial. When
> set up properly JNOS is very fast. I deal with a JNOS system on the internet
> and it sends me stuff at 65kb/s which is a dos limitation I think, but
> plenty fast for any ham radio link.

Could you post the information on proper setup to this group?
It would be most helpful to collect "optimum" parameter settings
for 1200, 9600, 56k, ethernet, etc.

Hank Oredson @ Mentor Graphics Library Operations
Internet : hank_oredson@mentorg.com "Parts 'R Us!"
Amateur Radio: W0RLI@W0RLI.0R.USA.NOAM

56. Re: [NETSIG:2436] Re: Linux vs JNOS on a junker

From: Charles Brabham <n5pvl@texoma.com>
Date: Wed, 17 Apr 1996 15:52:02 -0500
To: netsig@tapr.org
Message-ID: <199604172052.PAA14393@mercury.texoma.com>
Rendered body type: text/plain

At 06:28 AM 4/17/96 -0500, Steve wrote:

>to another computer (well a Z-80) over a serial wire. Why Kantronics doesn't
>throw in a 10Base-T or thin net interface instead of a serial port at this late
>date, is a puzzle. (or any other TNC manufacturer). I'd spend the additional
>few dollars...
>
>--
>Steve, N50WK

I think you've made a very good point there, Steve. I'd rather have a
"network" of TNC's controlled thru an ethernet card than to continue
struggling along with COM ports.

I bet you could run something like that with 'BPQ or any of the *NOS programs.

Is that what you had in mind? I think we ought to kick your idea around, and
promote it. Do you have any further thoughts on this?

How about a "box" which allows a normal TNC to be controlled in this way?

----- 73 DE Charles N5PVL -----
E-Mail: n5pvl@texoma.com
Packet: N5PVL @ N5PVL.#NTX.TX.USA.NOAM
Page: <http://www.texoma.com/~n5pvl>

57. Re: [NETSIG:2436] Re: Linux vs JNOS on a junker

From: Charles Brabham <n5pvl@texoma.com>
Date: Wed, 17 Apr 1996 09:10:19 -0500
To: netsig@tapr.org
Message-ID: <199604171410.JAA24577@mercury.texoma.com>
Rendered body type: text/plain

At 06:28 AM 4/17/96 -0500, Steve wrote:

>to another computer (well a Z-80) over a serial wire. Why Kantronics doesn't
>throw in a 10Base-T or thin net interface instead of a serial port at this late
>date, is a puzzle. (or any other TNC manufacturer). I'd spend the additional
>few dollars...
>
>--
>Steve, N50WK

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"network" of TNC's controlled thru an ethernet card than to continue
struggling along with COM ports.

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How about a "box" which allows a normal TNC to be controlled in this way?

----- 73 DE Charles N5PVL -----
E-Mail: n5pvl@texoma.com
Packet: N5PVL @ N5PVL.#NTX.TX.USA.NOAM
Page: <http://www.texoma.com/~n5pvl>

58. Re: [NETSIG:2441] Re: Linux vs JNOS on a junker

From: "S. Sampson" <ssampson@telepath.com>
Date: Wed, 17 Apr 1996 19:39:48 -0500
To: netsig@tapr.org
Message-ID: <31758F54.1BF2@telepath.com>
Rendered body type: text/plain

Charles Brabham wrote:

>
> At 06:28 AM 4/17/96 -0500, Steve wrote:
> >Why Kantronics doesn't
> >throw in a 10Base-T or thin net interface instead of a serial port at this late
> >date, is a puzzle. (or any other TNC manufacturer). I'd spend the additional
> >few dollars...
> >
> >--
> >Steve, N5OWK
>
> I think you've made a very good point there, Steve. I'd rather have a
> "network" of TNC's controlled thru an ethernet card than to continue
> struggling along with COM ports.
>
> I bet you could run something like that with 'BPQ or any of the *NOS programs.
>
> Is that what you had in mind? I think we ought to kick your idea around, and
> promote it. Do you have any further thoughts on this?
>
> How about a "box" which allows a normal TNC to be controlled in this way?

That generates a question also. I would think the bottleneck is the low baud rate serial transfer on each end. Would removing one end suffice? That is, a black-box with an ethernet jack and 4 - 8 serial ports. The TNC's are then run to the black-box. That would make for an interesting kit though.

I don't know, but I suspect ethernet on-board (running to a FIFO buffer to be reclocked into the SIO) would be the better way to go.

--
Steve, N5OWK

59. Re: [NETSIG:2443] Re: Linux vs JNOS on a junker

From: mwestfal@csci.csusb.edu (Michael Westfall)
Date: Wed, 17 Apr 1996 19:57:05 -0700 (PDT)
To: netsig@tapr.org
Message-ID: <199604180257.TAA00440@csci.csusb.edu>
Rendered body type: text/plain

>
> That generates a question also. I would think the bottleneck is the low baud
> rate serial transfer on each end. Would removing one end suffice? That is,
> a black-box with an ethernet jack and 4 - 8 serial ports. The TNC's are then
> run to the black-box. That would make for an interesting kit though.

Hmm.. Starting sound like the \$10,000 packet switch product that the company I work for sells to the railroad industry....

--

73 de Mike, ax.25net: N6KUY@W6JBT.#SOCA.CA.USA.NA
 amprnet: n6kuy@n6kuy.ampr.org [44.18.0.49]
 internet : mwestfal@csci.csusb.edu
 web: http://orion.csci.csusb.edu:8080

"Linux: The Gates of Hell shall not prevail."
GCS/M { -d+ p+ c++ l u++ e+(*) m++(-) s/+ !n-(---) h-- !f g+ w+ t++ r-(--) y+ }

60. Re: [NETSIG:2443] Re: Linux vs JNOS on a junker

From: Chris Terwilliger <zoom@willow.sps.mot.com>
Date: Thu, 18 Apr 1996 10:19:45 -0600 (MDT)
To: netsig@tapr.org
Message-ID: <Pine.SUN.3.91.960418101649.2493A-100000@willow>
Rendered body type: text/plain

> That generates a question also. I would think the bottleneck is the low baud
> rate serial transfer on each end. Would removing one end suffice? That is,
> a black-box with an ethernet jack and 4 - 8 serial ports. The TNC's are then
> run to the black-box. That would make for an interesting kit though.

This is called a terminal server...I was thinking about using an old 3com
CS2100 we had laying around until I got my hands on a ALM board (16 port
serial card) for my Sun 4/280. The ALM will be much easier to deal with...

Chris, AA7WD

61. Re: [NETSIG:2438] Re: Linux vs JNOS on a junker

From: Hank Oredson <Hank_Oredson@MENTORG.COM>
Date: Thu, 18 Apr 1996 11:20:50 -0800
To: netsig@tapr.org
Message-ID: <9604181823.AA24663@em-wv03.wv.mentorg.com>
Rendered body type: text/plain

At 04:43 PM 4/17/96 -0500, you wrote:
>>The best thing going today, is the
>>JNOS in a junker, with a real operating system connected to it via Ethernet.
>>I'm currently running JNOS in an old 486 junker with an ethernet to a
Win95 box.
>
>
>Or a Linux box - I have been saying this for years! A JNOS "radio front-end"
>to interface to the TNC's and a more capable box, ethernet connected, doing
>the fancy client (and some server) stuff.

For the past 18 months, I've run a somewhat different configuration:

Front end is a 486/50 with ten radios.
G8BPQ switch plus CLOVER.
IPGATE for ip routing.
Typical AX.25 applications including BBS, RT, FT, QTH, etc. etc.

Middle is a 386/20 running modified JNOS.
No radios, although the system could have radios if desired.
DNS, mail exchanger, other typical tcp services.

Back end is P90 Win95 system.
No radios.
Typical winsock applications, including httpd, ftpd, and client tcp stuff.

The three machines are connected via ethernet.
Front <-> Middle runs BPQ-NET/ROM-over-IPX-over-ethernet.
Middle <-> Back runs normal tcp/ip.

The upside is you get to play with all the different kinds of
things you might want to do ... and the interactions are well separated.
The downside is you have three systems to administer.

Could run Linux/TNOS on Middle instead of JNOS, if it supports the
connect over ethernet (SPX/IPX) to BPQ. I chose instead to hack JNOS
because there was a reasonably stable source available two years ago
when we started this project.

There are presently three people running this configuration in the
Portland area: w0rli, wa7sjn, n7qdn. Will probably add two or three
more during the next six months. Kinda fun being able to play with
www over ham radio. All radio links involved are 9600 baud ... and
that is just fast enough to make it worthwhile, and just slow enough
to convince us to start thinking about 56k and T1.

Hank Oredson @ Mentor Graphics Library Operations
Internet : hank_oredson@mentorg.com "Parts 'R Us!"
Amateur Radio: W0RLI@W0RLI.OR.USA.NOAM

62. Re: [NETSIG:2443] Re: Linux vs JNOS on a junker

From: Charles Brabham <n5pvl@texoma.com>
Date: Thu, 18 Apr 1996 18:33:08 -0500
To: netsig@tapr.org
Message-ID: <199604182333.SAA24082@mercury.texoma.com>
Rendered body type: text/plain

At 07:58 PM 4/17/96 -0500, you wrote:

>> I think you've made a very good point there, Steve. I'd rather have a
>> "network" of TNC's controlled thru an ethernet card than to continue
>> struggling along with COM ports.
>>
>> How about a "box" which allows a normal TNC to be controlled in this way?

>
>That generates a question also. I would think the bottleneck is the low baud
>rate serial transfer on each end. Would removing one end suffice? That is,
>a black-box with an ethernet jack and 4 - 8 serial ports. The TNC's are then
>run to the black-box. That would make for an interesting kit though.
>
>I don't know, but I suspect ethernet on-board (running to a FIFO buffer to be
>reclocked into the SIO) would be the better way to go.

>

Yes, the ethernet on-board sounds like the best thing to shoot for in the long run. I wonder if the TNC2 (or TNC95) design would allow a cheap add-on kit for this purpose? Can the TNC2's serial interface be bypassed altogether for a speed advantage?

By the way, I dunno much about ethernet interfaces.. How fast are they compared to a serial interface? I guess a good way to measure that would be: " How many 1200 baud TNC's can the interface support? - How many at 9600 bd, ect.?"

The "box" I mentioned would plug directly into the TNC's serial port, with a coax connector on the other side for the ethernet connection. One box for each networked TNC. It would be pricey, but then again it would be "plug 'n play", allowing the use of old TNC's so the cost would be offset somewhat.

The black box with 4-8 serial ports you mentioned would be cheaper in the long run, and would probably sell better.
I can't imagine a BBS SYSOP or NOS Op who wouldn't jump at a chance for something like that, even if there was little or no speed advantage. There would still be all those freed-up COM ports, making it easier to utilize a mouse or modem.
This would be a great time for an innovation like this, as a lot of BBS SYSOPs are trying out Windows-based software which requires use of a mouse. A lot of guys are wondering where they are going to come up with another COM port right now.

Developing a driver for *NOS would be fairly easy, I would think. I'm not sure about 'BPQ, but understand that some ethernet card support is already there so it may not be a big problem.
Would something like BPQ's multidropped KISS mode be necessary for this? Could X1J nodes be stacked up this way perhaps, with a BPQ switch allowing access to applications like NOS or a BBS?

I have used the old DRSI cards for years as a way to avoid fooling with COM ports more than I have to. The HDLC cards give you two TNC's per slot in your computer, while this ethernet-style interface would give you 4-8 TNC's per slot. (Maybe more, depending on just how fast ethernet is, combined with the overhead involved in juggling all those TNC's.)

This may be another application where Tom and Brian's Q-BIT AX25 extensions would come in handy.

----- 73 DE Charles N5PVL -----
E-Mail: n5pvl@texoma.com
Packet: N5PVL @ N5PVL.#NTX.TX.USA.NOAM
Page: <http://www.texoma.com/~n5pvl>

63. Re: stuff

From: Bill Vodall <vodall@bigsky.dillon.mt.us>
Date: Sat, 20 Apr 1996 15:20:51 -0700 (MDT)

To: netsig@tapr.org
Message-ID: <m0uAk5M-0002mrC@mtewe.kevin.mt.us>
Rendered body type: text/plain

>
> 73, Bob
> -----
> Bob Donnell, KD7NM bob@kd7nm.ampr.org rdonnell@eskimo.com
> Western Washington Amateur IP Address Coordinator (206) 775-3651
> -----

Bob,

I have a small mailing list for my weekly summary of packet activity in Montana. The latest sample is attached. Would you like me to add you to list?

73,
Bill

--

Bill Vodall Box 75 Kevin, Mt 59454 1-406-337-2222
Reply-To: vodall@bigsky.dillon.mt.us
Amateur Packet: wa7nwp@wa7nwp.#ncmt.mt.usa.noam
Glacier Waterton Hamfest: <http://thor.tlatch.com/hamfest>

Notes of Montana Packet and Backbone Net - 4/14/96 (and 4/7/96)

Posted 4/20/96 by WA7NWP

We meet following the Montana ARRL Section net each Sunday morning on or about 3.880 MHz. The section net meets at 8:00 Mountain Time and the packet net usually starts around 8:15. Packet discussion usually ends up on 3.900 MHz at 9:00 to prevent interference to the folks on the coast.

*** next Montana Packet Backbone Meeting April 27 in Butte. ***
* contact K7KCR or WA7PZ0 for tables at the swapfest.
* Talk-in will be on 146.34/94 T114.8 and 147.94/34
* At the Margaret Leary School
* Exams at 1. Packet meeting at 10 or 11
* Go south from Harrison Exit approximately 1 mile to the
4 1/2 Mile "B" road. Turn right at old Penny Store. Go 4 blocks.

*** Billings folks are having a swapfest also on 4/27. ***
* Setup at 9 a.m. Doors open at 10.

Billings area packet meetings are being held the first Monday of the month at Perkins. 7 p.m.

NET Checkins

4/7
K7YD(NCS), VE6GLF, WA7NWP, KD7HP, N7VMR, AB7OE, KF7R, WA7KHM,
N7AGP, WA7JDX, N7DLK, KC7Z0, AA7YA

4/16
K7YD(NCS), KD7HP, N7AGP (mobile between Battle Mtn and Elko NV),
K7KCR, W7DE0, AA7YA, WA7KHM, VE6GLF

News

Billings has upgraded the Columbus link site so there's a dedicated 9600 circuit to both the BAN area local access nodes and to the wide area link at BIL. Performance is much improved over the old 3-point link between the sites.

State of the Network

HAV/#HAV are back.

Path to east across the Hiline is marginal. Seems that sometimes ZORT works well but completely dies at other times.

BBS traffic forwarding

Grinding away. Calgary to Medicine Hat UHF link is down so we're not receiving as much traffic as before.

MT HF Forwarding

AA7YA continues to have good luck passing traffic to Post Falls, Idaho on 40 meters. I need to do some antenna work to improve my link to W0RLI and the other stations on 40.

K7YD and others are working on 30 meter PACTOR with some good success and, as usual, little details to be worked out.

National Traffic System

Nothing to report. Montana Traffic Net continues to be busy but very little of the traffic comes or goes on the packet network.

Emergency Preparation

Montana nodes with backup power:

- SHEEP, MTWP, BTM, BIL, BAN, #CLBUS, MSO, FISH

Montana EC's on packet!

- SCM, N7KOR, is. (But isolated now by the loss of #HAV)
- SEC, K7VMR is!
- Daniels County - AA7YA

TCP/IP

We have a new station in Ashland joining the network soon.

Progress is being made towards moving the Lethbridge Gateway platform from JNOS to TNOS on Linux. That will remove the 640K memory limitation currently restricting the number of node links.

KA7HTC(.ampr.org) now has the Dec 95 Buckmaster CD-Rom running on his JNOS system. This can be accessed several ways.

- connect to KA7HTC-1 from SWTLAN and use the Q or Finger commands.
- finger <call>@ka7htc.ampr.org from any IP station in the state.
- send mail to: "mailer@ka7htc.ncmt.mt.usa.noam" Any subject.
Put in the message, <call>
<call>
quit

The callbook information will be returned by packet mail.

4/27 Butte Packet Meeting Agenda

* Let's decide where we're going with the backbone.

The discussion continues... Many issues are involved. Performance, reliability, hidden transmitters, expandability, expense and investment, maintenance, etc... Where to go next is "up in the air"..

- * TCP/IP Overview
 - What it is. What it's good for. And what it's not good for.
 - * Other?
-

64. Possible data radio for 9600.

From: ssharp@VNET.IBM.COM
Date: Sat, 20 Apr 96 20:56:16 EDT
To: netsig@tapr.org
Message-ID: <199604210103.UAA08687@tapr.org>
Rendered body type: text/plain

I Just ran across an ad in the apr. '96 issue in Nuts and Volts for some data radios. There real cheap, like \$69 for 2 of them. There a Motorola p-10 HLE9018. The ad states there for 450 - 560 Mhz.

I was wondering if anyone was familiar with these and could tell me if they could be re-crystaled for the 440 band. And also if they could be used 9600 baud packet links.

Seems to me that these would be a less expensive way to go then the TEKK radio's.

The radio side of packet is not my strong point.

Any ideas or input would be greatly appreciated

Thanks,

73 de Steve, N1PBS

65. [NETSIG:2448] Re: stuff (fwd)

From: Bill Vodall <vodall@bigsky.dillon.mt.us>
Date: Mon, 22 Apr 1996 09:12:58 -0700 (MDT)
To: netsig%tapr.org@gw.ve6lip.ampr.org
Message-ID: <m0uBNIT-0002mrC@mtewe.kevin.mt.us>
Rendered body type: text/plain

Forwarded message:

> From: Bill Vodall <vodall@bigsky.dillon.mt.us>
> Subject: [NETSIG:2448] Re: stuff
>
> I have a small mailing list for my weekly summary of packet activity
>

Sorry about that folks... Must have been in a hurry and did a "r" by mistake...

Bill Vodall Box 75 Kevin, Mt 59454 1-406-337-2222
Reply-To: vodall@bigsky.dillon.mt.us
Amateur Packet: wa7nwp@wa7nwp.ncmt.mt.usa.noam
Glacier Waterton Hamfest: <http://thor.tltech.com/hamfest>

June 1996

Original source file: netsig.9606

Source: http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.9606

1. bpqhkiss

From: mead@dg-rtp.dg.com (Glenn Mead)
Date: Sun, 2 Jun 1996 10:08:58 -0400 (EDT)
To: netsig@tapr.org, bbssig@tapr.org
Message-ID: <199606021408.KAA00552@teton>
Rendered body type: text/plain

I hope this is the right place for this request. If not, my apologies.

I am trying to get a packet bbs node up and running. I inherited the sysop role and am not a packet expert. We were having stability problems and I was told that I should switch from the netrom eproms we were using to bpqkiss eproms. The switch was made, but I can't get the system to work. The bpq docs indicate that I must load bpqhkiss after loading bpqcode. The problem is that I can't find any docs on bpqhkiss to explain the three command line args it requests:
bpqport BIOSport portmask

I would really appreciate help with this.

Also, the bpq docs say to wire the two tnc's together. Currently the two tnc's are attached to a diode-matrix board. One of the club members felt that this would work the same as the recommended wiring. Comments?

System configuration:

386/16
4 mb memory
70 mb disk
2 comm ports
4 port diode-matrix attached to comm 1
PacComm Tiny-2 tnc with bpqkiss eprom and dcd board (1200 baud 2m)
PacComm Tiny-2 tnc with bpqkiss eprom (9600 baud 70cm)
dos 6.22
fbb 5.15c
bpq 4.08a

I would really appreciate any help on this, includeing copies of autoexec.bat, port.sys and bpqcfg.txt.

Thanks and 73,
ke4zea - Glenn Mead

e-mail: mead@dg.com

--

Glenn Mead	KE4ZEA		
Data General Corp.	e-mail	mead@dg.com	Without challenge there
62 Alexander Dr.	voice	919/248-6029	is no chance to excel.
RTP, NC 27709	fax	919/248-6108	
packet KE4ZEA@KB4WGA.#DUR.NC.USA.NOAM			

2. Re: [NETSIG:2712] bpqhkiss

From: "Corey H. Dean (N3GZW)" <cdean@epix.net>
Date: Sun, 2 Jun 1996 12:05:48 -0400 (EDT)
To: netsig@tapr.org
Cc: netsig@tapr.org
Message-ID: <1.5.4.16.19960602001016.18a7087a@mailhost.epix.net>
Rendered body type: text/plain

We have done this exact setup at out stack. Send a copy of this letter to ke3ht@epix.net

At 09:22 AM 6/2/96 -0500, Glenn Mead wrote:
>I hope this is the right place for this request. If not, my apologies.
>

>I am trying to get a packet bbs node up and running. I inherited the sysop
>role and am not a packet expert. We were having stability problems and I
>was told
>that I should switch from the netrom eproms we were using to bpqkiss eproms.
>The switch was made, but I can't get the system to work. The bpq docs
>indicate that I must load bpqhkick after loading bpqcode. The problem is
>that I can't find any docs on bpqhkick to explain the three command line
>args it requests:
>bpqport BIOSport portmask
>
>I would really appreciate help with this.
>
>
>Also, the bpq docs say to wire the two tnc's together. Currently the
>two tnc's are attached to a diode-matrix board. One of the club
>members felt that this would work the same as the recommended wiring.
>Comments?
>
>
>System configuration:
>386/16
>4 mb memory
>70 mb disk
>2 comm ports
>4 port diode-matrix attached to comm 1
>PacComm Tiny-2 tnc with bpqkiss eprom and dcd board (1200 baud 2m)
>PacComm Tiny-2 tnc with bpqkiss eprom (9600 baud 70cm)
>dos 6.22
>fbb 5.15c
>bpq 4.08a
>
>I would really appreciate any help on this, includeing copies
>of autoexec.bat, port.sys and bpqcfg.txt.
>
>Thanks and 73,
>ke4zea - Glenn Mead
>
>e-mail: mead@dg.com
>
>
>--
>
>
>-----
>| Glenn Mead | KE4ZEA | |
>| Data General Corp. | e-mail mead@dg.com | Without challenge there |
>| 62 Alexander Dr. | voice 919/248-6029 | is no chance to excel. |
>| RTP, NC 27709 | fax 919/248-6108 | |
>|-----
packet KE4ZEA@KB4WGA.#DUR.NC.USA.NOAM
>
>
>
>From the Shack of Corey H. Dean

N3GZW@N3GZW.#NCPA.PA.USA.NOAM
n3gzw@n3gzw.epix.ampr.org
44.80.200.6
or
cdean@epix.net

3. RE: [NETSIG:2713] Re: bpqhkick

From: Ron Curry <recurry@insighttec.com>
Date: Sun, 2 Jun 1996 16:47:39 -0700
To: "'netsig@tapr.org'" <netsig@tapr.org>
Message-ID: <01BB50A3.36913D40@expressp5.insighttec.com>
Rendered body type: text/plain

From: Corey H. Dean (N3GZW) [SMTP:cdean@epix.net]
Sent: Sunday, June 02, 1996 4:28 AM
To: netsig@tapr.org
Subject: [NETSIG:2713] Re: bpqhkick

We have done this exact setup at out stack. Send a copy of this letter to
ke3ht@epix.net

At 09:22 AM 6/2/96 -0500, Glenn Mead wrote:
>I hope this is the right place for this request. If not, my apologies.

```

>
>I am trying to get a packet bbs node up and running. I inherited the sysop
>role and am not a packet expert. We were having stability problems and I
>was told
>that I should switch from the netrom eproms we were using to bpqkiss eproms.
>The switch was made, but I can't get the system to work. The bpq docs
>indicate that I must load bpqhkick after loading bpqcode. The problem is
>that I can't find any docs on bpqhkick to explain the three command line
>args it requests:
>bpqport  BIOSport  portmask
>
>I would really appreciate help with this.
>
>
>Also, the bpq docs say to wire the two tnc's together. Currently the
>two tnc's are attached to a diode-matrix board. One of the club
>members felt that this would work the same as the recommended wiring.
>Comments?
>
>
>System configuration:
>386/16
>4 mb memory
>70 mb disk
>2 comm ports
>4 port diode-matrix attached to comm 1
>PacComm Tiny-2 tnc with bpqkiss eprom and dcd board (1200 baud 2m)
>PacComm Tiny-2 tnc with bpqkiss eprom (9600 baud 70cm)
>dos 6.22
>fbb 5.15c
>bpq 4.08a
>
>I would really appreciate any help on this, includeing copies
>of autoexec.bat, port.sys and bpqcfg.txt.
>
>Thanks and 73,
>ke4zea - Glenn Mead
>
>e-mail: mead@dg.com
>
>
>---
>
>
> |-----|
> | Glenn Mead | KE4ZEA | | |
> | Data General Corp. | e-mail mead@dg.com | Without challenge there |
> | 62 Alexander Dr. | voice 919/248-6029 | is no chance to excel. |
> | RTP, NC 27709 | fax 919/248-6108 | |
> |-----|
> | packet KE4ZEA@KB4WGA.#DUR.NC.USA.NOAM |
> |-----|
>
>
>
>
>From the Shack of Corey H. Dean

```

```

N3GZW@N3GZW.#NCPA.PA.USA.NOAM
n3gzw@n3gzw.epix.ampr.org
44.80.200.6
or
cdean@epix.net

```

4. Flexnet

```

From: Pascal Montaigne <Pascal.Montaigne@FMS.host.org>
Date: Sun, 2 Jun 1996 08:05:10 +-200
Message-ID: <01BB5137.8EE2CCE0@fms.host.comnet.fr>
Rendered body type: text/plain

```

Looks like there is a lot of interest for this sotware recently. I understand it has all kind of neet features that could be ported on other systems, but as far as I am concerned there is a major drawback, the addressing is flat. This means that every host must have a pointer for every other host in the network. Works great in medium size areas, but must be a killer on big networks.

73, Pascal, f5poe

5. Re: [NETSIG:2715] Flexnet

```

From: Chuck Hast <whast@gateway.utilpart.com>
Date: Mon, 03 Jun 1996 09:58:38 -0400

```

To: netsig@tapr.org
Message-ID: <31B2EF8E.767F@gateway.utilpart.com>
Rendered body type: text/plain

Pascal Montaigne wrote:

>

> Looks like there is a lot of interest for this software recently. I understand it has all kind of neat features that could be ported on other systems, but as far

>

> 73, Pascal, f5poeYep, and when the author was here in Tampa back a couple of years ago I asked him about doing something like X.121 routing in ROSE, but it would not go through his head, you get a big network and you fall into the same flat pit, it becomes NetRom revisited.

The gentleman kept on telling me, "callsigns are all you need" but how do you route on so many calls, with a domain type routing system you only need know a small amount of info about the distant network...

6. Re: [NETSIG:2715] Flexnet

From: Eric BERTREM <infracom@meteor.aurecvideo.fr>
Date: Mon, 03 Jun 1996 16:20:33 +0200
To: netsig@tapr.org
Message-ID: <1.5.4.32.19960603142033.0066fcf0@meteor.aurecvideo.fr>
Rendered body type: text/plain

Hi,

F5POE wrote :

>Looks like there is a lot of interest for this software recently. I understand >it has all kind of neat features that could be ported on other systems, but as >far as I am concerned there is a major drawback, the addressing is flat. This >means that every host must have a pointer for every other host in the network. >Works great in medium size areas, but must be a killer on big networks.

in medium size areas ?? So, you consider Germany, Austria, Switzerland, Denmark, Eastern and Southern France, Luxembourg, and southern Belgium as a small area ? Come on, be serious, stop wasting time writing nonsenses.

As far as I know, the addressing you use is FPAC (Rose like). Can you please explain how user friendly it is ? Do you prefer asking C F6XXX F1AAA9 12345 instead of **simply** asking C F6XXX your_local_digi F6XXX_digi ?

In addition, how often do you have to MANUALLY change your routes when a link breaks down ? FlexNet does it by itself, and always find the most efficient path when a connection is requested.

What about failures ? Next to me, another computer has been connected to Germany (DB0GV) since this morning. At this time, I've downloaded 73 parts of 13 Kbyte each, without any failures (= 949 Kbyte). When I asked for the path used, I get : F6KDF-3, F6KDF, F6BIG-2, HB9IAC, HB9IAP, HB9IAP-11, HB9IAC-11, HB9EAS, HB9AK-1, DB0HP, DB0HER, DB0LBG, DB0LX, DB0RBS, DB0SEL, DB0AAI, DB0ZDF, DB0GV.

There are 18 digipeaters, all RMNC or PC/FlexNet. If FlexNet is "a killer on big networks", I'd like to have more killers like this one, especially in Paris area (see what I mean ?!)... :-))

Last thing : you don't have to "have a pointer for every other host in the network". Did you really think that ALL routes would have been sent to ALL FlexNet digipeaters ? Come on ! :-) There's a time limit : if a connection is supposed to take longer than 5 minutes, the system considers it's not worth trying, and simply doesn't get routes like that.

You definitely should test FlexNet BEFORE writing it isn't efficient, or making unfair comments. It's the only intelligent way to improve your knowledge, isn't it ? :-))

73,

Eric BERTREM / Lyon
Email : infracom@meteor.aurecvideo.fr
Packet : F5PJE @ HB9IAP

Tél : 0801-6405 // Fax : 7208-8142

PC/FlexNet WWW : <http://www.imaginet.fr/~ferracci/flexnet>

7. RE: FlexNet

From: Pascal Montaigne <Pascal.Montaigne@FMS.host.org>
Date: Tue, 4 Jun 1996 03:56:58 +-200
To: "'netsig@tapr.org'" <netsig@tapr.org>
Message-ID: <01BB51CA.099DC9C0@fms.host.comnet.fr>
Rendered body type: text/plain

Hi Eric
in medium size areas ?? So, you consider Germany, Austria, Switzerland, Denmark, Eastern and Southern France, Luxembourg, and southern Belgium as a small area ? Come one, be serious, stop wasting time writing nonsenses. Yes this is a medium size network

As far as I know, the addressing you use is FPAC (Rose like). Can you please explain how user friendly it is ? Do you prefer asking C F6XXX F1AAA9 12345 instead of ****simply**** asking C F6XXX your_local_digi F6XXX_digi ?

In addition, how often do you have to MANUALLY change your routes when a link breaks down ? FlexNet does it by itself, and always find the most efficient path when a connection is requested.

What about failures ? Next to me, another computer has been connected to Germany (DB0GV) since this morning. At this time, I've downloaded 73 parts of 13 Kbyte each, without any failures (= 949 Kbyte). When I asked for the path used, I get : F6KDF-3, F6KDF, F6BIG-2, HB9IAC, HB9IAP, HB9IAP-11, HB9IAC-11, HB9EAS, HB9AK-1, DB0HP, DB0HER, DB0LBG, DB0LX, DB0RBS, DB0SEL, DB0AAI, DB0ZDF, DB0GV.

There are 18 digipeaters, all RMNC or PC/FlexNet. If FlexNet is "a killer on big networks", I'd like to have more killers like this one, especially in Paris area (see what I mean ?!)... :-))
Sorry the topic was on FlexNet.

Last thing : you dont have to "have a pointer for every other host in the network". Did you really think that ALL routes would have been sent to ALL FlexNet digipeaters ? Come on ! :-) There's a time limit : if a connection is supposed to take longer than 5 minutes, the system considers it's not worth trying, and simply doesn't get routes like that.
So you agree all FlexNet digi must have a route to all other available digi, otherwise you can't reach them.

You definitely should test FlexNet BEFORE writing it isn't efficient, or making unfair comments. It's the only intelligent way to improve your knowledge, isn't it ? :-))
I said that I did not think that flat addressing was the way to go. Does not take much testing to figure that out.
Apart from this I am ready to believe FlexNet, as it is implemented around Germany, works great. The main reason being that it sit on a strong level 2 plus all the nice features that I already mentioned. I am more than ready to improve my knowledge but I must say that it will be a lot easier if I had the source code for the product and if we could move and try those features to other networking systems.

I understand that you are trying to sell us FlexNet, but all my sales class always said that you should present the benefit of your products, not the drawbacks of your competitor (but personally I am not on the selling side I just compare solutions)
And even if we don't agree with you, I nether tried to imply that you where stupid, so please do the same !!!

Regards, Pascal, f5poe

8. Re: [NETSIG:2718] RE: FlexNet

From: Eric BERTREM <infracom@meteor.aurecvideo.fr>
Date: Tue, 04 Jun 1996 17:30:13 +0200
To: netsig@tapr.org
Message-ID: <1.5.4.32.19960604153013.0067df18@meteor.aurecvideo.fr>
Rendered body type: text/plain

F5POE wrote :

>>in medium size areas ?? So, you consider Germany, Austria, Switzerland,
>>Denmark, Eastern and Southern France, Luxembourg, and southern Belgium as a
>>small area ? Come one, be serious, stop wasting time writing nonsenses.

>Yes this is a medium size network

Funny, very funny : You should take a map :-)) To your mind, what is a BIG network ? The world ? :-))

>>There are 18 digipeaters, all RMNC or PC/FlexNet. If FlexNet is "a killer on
>>big networks", I'd like to have more killers like this one, especially in
>>Paris area (see what I mean ?!)... :-))

>Sorry the topic was on FlexNet.

and ? I explained how FlexNet was working, the topic is the same :-)

>>So you agree all FlexNet digi must have a route to all other available
digi, >>otherwise you can't reach them.

FlexNet has a dynamic router which avoids having unreachable routes. This means that I immediately know where I can go : it's no use trying a connection if it takes 5 minutes or more to connect, don't you agree ? This wouldn't be an efficient network (this morning, I've got 386 routes on my local digi).

>>I said that I did not think that flat addressing was the way to go. Does not >>take much testing to figure that out.

You'd better use FlexNet before writing nonsenses :-). The French official (= F6ABJ) policy consists in saying that dynamic routing is dead, and that static routers are better. I'm not convinced at all : when I try a connection via your beloved FPAC, I always get disconnected for a reason or another (link failure, L1 defect, etc...). When I use FlexNet, I never get these troubles. Can you explain why ? I even don't mean FlexNet on the German network, which is certainly the best one around here, but simply on my local network : it works, and we don't have to spend thousand of hours to have it run.

>>I am more than ready to improve my knowledge but I must say that it will be a >>lot easier if I had the source code for the product and if we could move and >>try those features to other networking systems.

I already said, in the Flex maillist, that a flexnet router is used in WAMPES. Since Wampes provides sources, you'll easily find a way to use FlexNet frames on your own system. In addition, I've found a program which interfaces with GP/2 (Graphic Packet for OS/2 Warp) and decodes FlexNet frames.

>>I understand that you are trying to sell us FlexNet, but all my sales class >>always said that you should present the benefit of your products, not the >>drawbacks of your competitor (but personally I am not on the selling side I >>just compare solutions)

Selling what ? FlexNet is shareware. In addition, even if I distribute BayCom, you don't need MY products to use PC/FlexNet : it can simply run with serial 1k2 modems, TNC-2s, Sound Blaster cards, etc...

But, if you insist, here are the advantages of what you call "my product" :-)

- . dynamic router : no need to manually change the routes when a link breaks down
- . user-friendly interface : a user can get informations, news, help, list of users, links, destinations, beacon's list, etc...
- . remote dos access : it allows the sysop to upload updates without moving to the digi's remote location
- . Hostmode interface : Dx-Cluster, FBB, Dx-Net, GP, TOP, and many other programs can be used on the SAME computer, with PC/FlexNet running as a TSR.
- . Multiple hardware drivers : serial 1k2 modem, lpt 9k6 modem, USCC cards, TNC-2 (with 6PACK Eprom), Sound Blaster, Texas Instrument DSP cards, KISS on COM ports, LPT links, etc... A programmer's interface is also provided to those who intend to create their own drivers.
- . reliable system : F6BIG-2 (RMNC/FlexNet) has been on the air for 207 days (almost 7 month), with NO resets.

>>And even if we don't agree with you, I nether tried to imply that you

A stupid ham is the one who argues without even having tested the system, and without any will to test it. Personnally, I tested The Net, FPAC and FlexNet. Now, I use FlexNet, it works fine in my area, and will never use any other system, unless you can prove it is more reliable, faster, and has a better router.

PC/FlexNet WWW : <http://www.imaginet.fr/~ferracci/flexnet>

Email: ferracci@imaginet.fr
http://www.imagnet.fr/~ferracci
AX25: F1JKJ@F5KAT.FMLR.FRA.EU

Laurent Montpellier [FRANCE]

It's amazing how easy it is to let something slide for weeks...

```

> At 11:26 PM 5/23/96 -0500, Bill Vodall wrote:
> >
> >Does anybody have a setup for compiling the X1J4 source on
> >a PC they could share?
> >
> >There's several small improvements here (dynamic p-persist,
> >automatic quality degradation on bad paths, etc) that should make
> >a noticeable improvement in network performance.
> >
> >Bill / WA7NWP
>
> What language is it in?
>
> *****
> ** Ronald C. Barnes KA1KJZ      Engineering Tech, Group W Satellite **
> ** 1591 W. Broad Street          ARRL CT Section Technical Coord.   **
> ** Stratford, CT 06497          Member, Soc. Broadcast Engineers    **

```

The X1J4 code is C with a Z80 target machine. It includes compiling options that allow building it on a PC for test purposes. There are comments in the source about needing to run it through an optimizer to make it fit. So finding the appropriate optimizer may be another little problem.

I'm surprised there isn't more interest in doing this. The existing software, while pretty darn neat, still tries to do everything for everybody. It should be possible to create special versions for special applications that yield better performance.

Bill

--

Bill Vodall, 31 Rimview Dr, Box 75, Kevin, Mt 59454 406-337-2222 FAX 337-4151
 Internet: vodall@aol.com wa7nwp@aol.com vodall@bigsky.dillon.mt.us
 AX25: wa7nwp@wa7nwp.ncmt.mt.usa.noam / DN48AR 48 45' N, 111 59' W
 AMPR-IP: wa7nwp@wa7nwp.ampr.org [44.82.0.62]
 Glacier Waterton Hamfest: <http://thor.tlatech.com/hamfest>

11. AX25 extension

```

From: mtewe!vodall@umt.umt.edu
Date: Mon, 10 Jun 1996 23:55:42 -0700 (MDT)
To: netsig@tapr.org
Message-ID: <m0uTMQb-0002mrC@mtewe.kevin.mt.us>
Rendered body type: text/plain

```

I'd like to throw out an idea I've been kicking around for a while. There are folks here (Brian, Thomas, Mike B, ?) that understand what's going on far better than I and can comment on just how feasible this would be.

The problem comes from the implementation of a portion of the Montana UHF packet backbone. It was designed for full duplex using single transmitters and multiple receivers at each major mountain top site. The problem is, the preliminary implementation consisted of one standard repeater channel flip-flopping the transmitter and receiver frequencies between sites. Since some sites see three or four others - the hidden transmitter problem is severe. (It wouldn't matter if all four transmitters were in the same room - they listen only to the destination, not to others going to the same place.)

A combination of limited resources, money, time, burn-out, frequency allocations, etc has made it unlikely that any of the real solutions such as more receivers, unique frequencies, dedicated links, etc, will be implemented.

There would be about zero chance of any major change being made to the software in the system. That rules out DAMA, ROSE, FLEXNET or ???

So - how do we improve things economically in a manner that doesn't break what already works?

Here's my idea.

Find some "bit" or unused control code. Preferably something that won't break the existing RR (receive ready) control packet. Probably similar to the existing Poll/Final system.

That would be the "ONLY" bit.

A node receiving a RRO (receive ready only) would know (or at least

assume) it has a clear channel and immediately (no slottime/persist) transmit any (or one) additional queued packets for the node that gave it the RRO go ahead.

All other nodes (and RRO smart systems) would see the "ONLY" bit as not being for them and wait for a given time period before transmitting again. Thus giving the one system a free and clear channel, reducing and possibly eliminating the hidden transmitter syndrome.

If the node receiving the RRO has no data to send - it could somehow flag that back and the sending node could issue a RR which all the other nodes would see and clear their RRO timers going back to business as usual.

The number of RRO commands to each node could vary per some random or other simple algorithm.

Another possible bent on the system would be to follow the calculated number of RRO packets to a node with a RRAB packet. (Receive Ready Anybody But xxxx).

If this was implemented with an unused bit in the RR packet - the older nodes would ignore it and work as before. So it would be possible to upgrade a system one node at a time without breaking the network.

So - any chance something like this could be implemented? There's got to be something we can do to get around the hidden transmitters and get a little more performance out of the TheNet circuits.

73,
Bill

--

Bill Vodall, 31 Rimview Dr, Box 75, Kevin, Mt 59454 406-337-2222 FAX 337-4151
Internet: vodall@aol.com wa7nwp@aol.com vodall@bigsky.dillon.mt.us
AX25: wa7nwp@wa7nwp.ncmt.mt.usa.noam / DN48AR 48 45' N, 111 59' W
AMPR-IP: wa7nwp@wa7nwp.ampr.org [44.82.0.62]
Glacier Waterton Hamfest: <http://thor.tlatech.com/hamfest>

12. Re: AX25 extension

From: waijkh@ix.netcom.com (Dave Maciorowski)
Date: Tue, 11 Jun 1996 08:03:12 -0600
To: netsig@tapr.org
Message-ID: <199606111404.HAA05750@dfw-ix2.ix.netcom.com>
Rendered body type: text/plain

Hi Bill,

>The problem comes from the implementation of a portion of the Montana UHF
>packet backbone. It was designed for full duplex using single transmitters
>and multiple receivers at each major mountain top site. The problem is, the
>preliminary implementation consisted of one standard repeater channel
>flip-flopping the transmitter and receiver frequencies between sites. Since
>some sites see three or four others - the hidden transmitter problem is
>severe. (It wouldn't matter if all four transmitters were in the same room -
>they listen only to the destination, not to others going to the same place.)
[snip]

Here's a suggestion for a different solution to your problem that works VERY well in the Denver area. Choose one of your sites that can hear several others. Add a duplexer and turn it into a full-duplex bit-regen repeater. Have the other sites listen on the repeater output and transmit on the repeater input. This repeater then becomes a "routing hub" amongst all the others. There is NO hidden transmitter with this configuration.

We have been using this configuration in Denver for a couple years with excellent results (see <http://www.rmsd.com/hamradio/dwg.html>) moving 4 Megabytes a day at 9600 baud.

73,

Dave

Dave Maciorowski, WA1JHK
Colorado Repeater Association, Inc.
Serving Colorado with Voice and Data, 6-Meters to 1.2 Gig


```

> excellent results (see http://www.rmsd.com/hamradio/dwg.html) moving 4
> Megabytes a day at 9600 baud.
>
>      73,
>
>      Dave
>
> -----
> Dave Maciorowski, WA1JHK

```

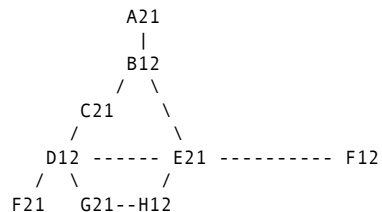
Hi Dave,

I've long been an advocate of regen's... Probably even sent the first packet message in Montana via one. (I had one of the original KG7BZ boards running at the house, - I was down at the pub with the HP95 porta-pkt outfit.) One of these days (years?) we'll get away from the evil nodes and start using regens..

But for now, and on the Mt UHF backbone, I don't think it would help.

It would work great for the nodes that connect through the regen. But with the current implementation, the hidden transmitter collisions would just be made worse at different spots in the pipeline.

Here's a snapshot of part of the configuration.



The "12" and "21" are the transmit and receive frequencies... Ie. A21 transmits on frequency 2 and receives on frequency 1.

Using a couple more frequencies and multiple receivers, this would work fine. As it is, it's collision city - worse (IMHO) than a single simplex mesh network like the old 145.010 days. We have 10 c.p.s. throughput using 100 c.p.s. equipment.

The nodes at B, D or E are prime candidates for a regen.

Let's try E. (Which, by the way, overlooks the flooding Yellowstone River that's currently in the news.) If E was a regen, then B, F and H have direct connectivity to each other. But look what happens at nodes G, C and A.

If B transmits to C or A, or H transmits to G, it's heard by all the other nodes (B, E, H, and F) in the regen cell. A packet from H to G used to be heard only by E. Now it's also heard by F and B.

So if H sends a packet to G, what happens to the packet going from A or C to B at the same time? They collide. The hidden transmitter problem has been moved down the chain. It's also been concentrated as the traffic from all the nodes in the regen cell is now hitting the corner nodes. Before, B was hearing A, C and E. Now B hears A, C, E, H and F. A, C and (E H F) are hidden transmitters.

It would probably be a worthwhile experiment to try it. I might be all wrong with my assumptions. The KG7BZ board is fairly easy to install and works great with X1J firmware. I try to convince the folks that have access to and maintain the node sites but as of yet haven't had any luck. The existing system has been working fairly well for over a year. Traffic is flowing. It's better by far than the old days on 145.010.

I've had other ideas:

- * Dump the split frequency and use a single UHF frequency. Some places the number of hidden transmitters would increase. Other locations would see nodes start to hear each other that can't now. That would decrease the hidden transmitters. A couple links would be bypassed. Less hops is better.

18. Re: [NETSIG:2727] Problems with the TAPR CD ?

From: Mark / KB2TXP <mharloff@spacetechn.com>
Date: Wed, 12 Jun 1996 22:34:23 -0400
To: netsig@tapr.org
Message-ID: <31BF7E2F.6E80@spacetechn.com>
Rendered body type: text/plain

n8ydt@nwohio.com wrote:

>
> NE>Hi,
>
> NE>I have had some problems whith the TAPR CD-ROM:
> NE>Some movies do not run on my system.
>
> NE>The two movies from the "packet intro", and the one named "slapr" seem
> NE>to have some problems. I get a "can't open xxx.mov" when i launch
> NE>them.
>
> NE>Other movies (APRS, ARRL...) are fine.
>
> NE>I'm using Quicktime for windows v2.01.
>
> NE>Has anyone else had the same problem ?

Yep, same here too... and those are the only ones, so far. I have only had 95 up and running for about 2 weeks, but there are some definate problems here (there)..

73 de Mark / KB2TXP @ KB2TXP.#WNY.NY.USA.NOAM
mharloff@spacetechn.com

19. Need help: MFJ tnc overheating !

From: frank paxton iii <paxton@sound.net>
Date: Thu, 13 Jun 1996 10:14:39 -0500
To: netsig@tapr.org
Message-ID: <31C0305F.369@sound.net>
Rendered body type: text/plain

i'm running an MFJ tnc with the tapr 9600 board / regen chip on our Mitrek 9600 baud DATAREPEATER here in kansas city.

i has run perfectly for MONTHS, but now with the HOT WX and poor circulation in the repeater room i'm having HEAT problems ...

i've got everything pulled apart, covers off, fans and all that and the repeater's running fine.

my question is: do MFJ tnc's have a history of running 'HOT'. the actual tnc itself gets quite warm ! even when located OUTSIDE the repeater cabinet !?!?! anyone have any experience with this ODD problem ?

please reply direct. thanks. frank. ng0n.

20. Re: [NETSIG:2725] Problems with the TAPR CD ?

From: rmackay@cycor.ca (Ron VE1AIC)
Date: Thu, 13 Jun 1996 21:06:43 -0300
To: netsig@tapr.org
Message-ID: <199606140006.VAA17222@bud.peinet.pe.ca>
Rendered body type: text/plain

>Hi,
>
>I have had some problems whith the TAPR CD-ROM:
>Some movies do not run on my system.
>
>The two movies from the "packet intro", and the one named "slapr" seem
>to have some problems. I get a "can't open xxx.mov" when i launch
>them.
>
>Other movies (APRS, ARRL...) are fine.
>
>I'm using Quicktime for windows v2.01.
>
>Has anyone else had the same problem ?

Yes I ahve noticed the same here, and I think its caused by files too large to load.
The ones that run fine are less than 10megs, such as APRS which is 5.85meg.

The files that won't load are:
MOVIES\PKTINTRO\

PACKET1.MOV 11.5M
PACKET2.MOV 36M

MOVIES\SLAPR82\ SPLAR82.MOV 36M

I'm using the QuickTime v 2.04.55 that came on the CD, and I'm running it on Win95 with 16M RAM.

73 - Ron

Ron Mackay Packet: VE1AIC@VE1AIC.PE.CAN.NOAM
Cornwall, PE E-mail: rmackay@peinet.pe.ca

21. Re: [NETSIG:2730] Need help: MFJ tnc overheating !

From: "Karl F. Larsen" <k5di@acca.nmsu.edu>
Date: Fri, 14 Jun 1996 05:26:22 -0600
To: netsig@tapr.org
Message-ID: <199606141126.FAA17535@acca.nmsu.edu>
Rendered body type: text/plain

Frank your site must be cooler than any we have in this part of the world. We have replaced most mfj tnc's but they should run cold! My guess is your 5 volt regulator is shorted and you have 12 volts on everything. Better check quick!

At 04:11 PM 6/13/96 -0500, you wrote:
>i'm running an MFJ tnc with the tapr 9600 board / regen chip on our
>Mitrek 9600 baud DATAREPEATER here in kansas city.
>
>i has run perfectly for MONTHS, but now with the HOT WX and poor
>circulation in the repeater room i'm having HEAT problems ...
>
>i've got everything pulled apart, covers off, fans and all that and
>the repeater's running fine.
>
>my question is: do MFJ tnc's have a history of running 'HOT'. the
>actual tnc itself gets quite warm ! even when located OUTSIDE the
>repeater cabinet !?!?! anyone have any experience with this ODD
>problem ?
>
>please reply direct. thanks. frank. ng0n.
>
>
>
>
Karl F. Larsen ---- k5di@acca.nmsu.edu --- <http://rever.nmsu.edu/~k5di/> -->

22. Re: [NETSIG:2730] Need help: MFJ tnc overheating !

From: Al Groff <al@pal.ia.net>
Date: Fri, 14 Jun 1996 20:15:28 -0500 (CDT)
To: netsig@tapr.org
Message-ID: <Pine.LNX.3.91.960614201010.15401A-100000@pal.ia.net>
Rendered body type: text/plain

On Thu, 13 Jun 1996, frank paxton iii wrote:

> i'm running an MFJ tnc with the tapr 9600 board / regen chip on our
> Mitrek 9600 baud DATAREPEATER here in kansas city.
>
Sounds just like the bit regen we have here in Cedar Rapids, ...

> i has run perfectly for MONTHS, but now with the HOT WX and poor
> circulation in the repeater room i'm having HEAT problems ...
>
> i've got everything pulled apart, covers off, fans and all that and
> the repeater's running fine.
>
To the best of my knowledge we have had no heat related electronics failures...

> my question is: do MFJ tnc's have a history of running 'HOT'. the
> actual tnc itself gets quite warm ! even when located OUTSIDE the
> repeater cabinet !?!?! anyone have any experience with this ODD
> problem ?
>

Yes, our run quite warm.. I have several that are stack on top of
each other and over a period of the the rubber feet turn in to
a guey mess..

But the just keep on running and running ...

one suggestion that would help just a little is use 27C512 prom..
uses a bit less power than the 27C512..

> please reply direct. thanks. frank. ng0n.
>
>
>
>

```
-73- AL -----+-----+-----+
Al Groff, K0VM      |      bbs : k0vm@wa0rjt.ia.usa.noam |
Cedar Rapids, Ia   |      packet : k0vm@k0vm.ampr.org   |
-----+-----+ internet : al@ia.net -----+
```

23. Re: [NETSIG:2730] Need help: MFJ tnc overheating !

From: mel@mo.net (Mel Whitten)
Date: Sun, 16 Jun 1996 11:17:22 -0500
To: netsig@tapr.org
Message-ID: <199606161634.LAA26383@Walden.MO.NET>
Rendered body type: text/plain

Frank,
On the earlier 1270/1270B the heatsink interface was very poor and
has resulted in the regulator shutting down in high ambient temp
environment. Verify you do have C-MOS parts for the CPU, SIO, eproms, etc.
Are you running 10Mhz parts (sio/cpu)? What is the total current drain?
It should be less than 175ma.
Mel, k0pfx

>i'm running an MFJ tnc with the tapr 9600 board / regen chip on our
>Mitretek 9600 baud DATAREPEATER here in kansas city.
>
>i has run perfectly for MONTHS, but now with the HOT WX and poor
>circulation in the repeater room i'm having HEAT problems ...
>
>i've got everything pulled apart, covers off, fans and all that and
>the repeater's running fine.
>
>my question is: do MFJ tnc's have a history of running 'HOT'. the
>actual tnc itself gets quite warm ! even when located OUTSIDE the
>repeater cabinet !?!?! anyone have any experience with this ODD
>problem ?
>
>please reply direct. thanks. frank. ng0n.
>
>
>
>
Mel Whitten, K0PFX

24. X1J pinged me to death!

From: wx3k@gw.wx3k.ampr.org (John_Zantek)
Date: Sat, 29 Jun 96 21:38:24 -0400
To: netsig@tapr.org
Message-ID: <2196@WX3K>
Rendered body type: text/plain
Message-Id: 2196_WX3K
From: wx3k@wx3k.eyw.fl.usa.noam (John_Zantek)
To: netsig@tapr.org

I just pinged a neighboring X1J node and the darn thing kept issuing
responses until it reached an evident 900,000 ms 'threshold' and
quieted down. I just looked over the X1J docs again and I don't
see anything about this.

Is there a hidden parm/timer to prevent more than one ICMP response from an X1J node? Is it looking for a quench, and if so, why?

25. Re: [NETSIG:2735] X1J pinged me to death!

From: "Karl F. Larsen" <k5di@acca.nmsu.edu>
Date: Sun, 30 Jun 1996 02:18:14 -0600
To: netsig@tapr.org
Message-ID: <199606300818.CAA29394@acca.nmsu.edu>
Rendered body type: text/plain

At 08:45 PM 6/29/96 -0500, you wrote:
>Message-Id: 2196_WX3K
>From: wx3k@wx3k.eyw.fl.usa.noam (John_Zantek)
>To: netsig@tapr.org
>
>I just pinged a neighboring X1J node and the darn thing kept issuing
>responses until it reached an evident 900,000 ms 'threshold' and
>quieted down. I just looked over the X1J docs again and I don't
>see anything about this.
>
>Is there a hidden parm/timer to prevent more than one ICMP response
>from an X1J node? Is it looking for a quench, and if so, why?

That is weird! We have a host of x1j2 through 4 nodes here and I ping them often just to see if things are working John. Course I am using JNOS to ping with. My feeling is that the node configuration is bad. Folks sure do odd things with the x1j configuration system...:) I use the default and it runs fine.

Karl F. Larsen ---- k5di@acca.nmsu.edu --- <http://rever.nmsu.edu/~k5di/> -->

26. Re: [NETSIG:2735] X1J pinged me to death!

From: "James C. Brost" <jimbo@panix.com>
Date: Sun, 30 Jun 1996 13:04:08 -0400
To: netsig@tapr.org
Message-ID: <v03007601adfc63112c7b@[166.84.248.168]>
Rendered body type: text/plain

>Message-Id: 2196_WX3K
>From: wx3k@wx3k.eyw.fl.usa.noam (John_Zantek)
>To: netsig@tapr.org
>
>I just pinged a neighboring X1J node and the darn thing kept issuing
>responses until it reached an evident 900,000 ms 'threshold' and
>quieted down. I just looked over the X1J docs again and I don't
>see anything about this.
>
>Is there a hidden parm/timer to prevent more than one ICMP response
>from an X1J node? Is it looking for a quench, and if so, why?

Try setting the mode to (Virtual Circuit). I have seen this happen when one station is set to send IP packets as Datagrams (UI frames).

--

<mailto:jimbo@panix.com>
<http://www.panix.com/~jimbo/>

Their are no bugs in the Internet,
only pot holes on the Super Information Highway!!

27. Re: [NETSIG:2737] Re: X1J pinged me to death!

From: John Zantek <wx3k@gw.wx3k.ampr.org>
Date: Sun, 30 Jun 1996 12:59:42 -0500 (CDT)
To: netsig@tapr.org
Message-ID: <199606301759.MAA03599@tapr.org>
Rendered body type: text/plain

At 12:18 PM 6/30/96 -0500, James C. Brost wrote:
>>Message-Id: 2196_WX3K
>>From: wx3k@wx3k.eyw.fl.usa.noam (John_Zantek)
>>To: netsig@tapr.org
>>
>>I just pinged a neighboring X1J node and the darn thing kept issuing
>>responses until it reached an evident 900,000 ms 'threshold' and
>>quieted down. I just looked over the X1J docs again and I don't
>>see anything about this.

73 John

Karl F. Larsen ---- k5di@acca.nmsu.edu --- <http://rever.nmsu.edu/~k5di/> -->

— — —

(c)

thanks everyone for your help with my 'hot' mfj tnc. i moved the voltage regulator over to the 'bulkhead' for heatsinking, and things are running cooler now ! my 'lockup' problem was actually in the MITREK. had a 'flakey' channel element connection among other things. ka0oxh, our MITREK master fixed it ... thank god.

now that our system is back up we're trying to refine the dxcluster feed from internet. n0cwr is the leavenworth,ks dxcluster server that gets a feed from wu3v via our internet gateway. he is linked to another server in lenexa, ks. this dxcluster system serves 25 users.

here's the problem: perhaps you can help.

wu3v(the feed source) occasionally drops. n0cwr gets to the gateway via netrom and then issues an 'axip' command to get to wu3v through a preconfigured 'wormhole'. when wu3v drops at his end, the netrom connection between the gateway (kc3ol) and n0cwr stays up ! as it does NOT drop, the BPQ software at n0cwr doesn't realize the feed is lost and does NOT try to reaquire wu3v until the netrom circuit fails.

1> i know jnos but NOT BPQ or DxCluster. can n0cwr PING wu3v through an 'axip' wormhole to determine when/if the link fails ? is there a 'ping' function of some kind in BPQ or DxCluster ?

2> are netrom connections supported through 'axip' wormholes ? a 'total' netrom route would be self policing.

3> any ideas ?

i know some of you will ask " Why not just NETROM all the way through to wu3v ? That way if wu3v drops then n0cwr will reaquire.

that's been tried and what seems to happen is that the link is 'too long' and other problems creep in enough to have caused us to go to the present configuration. but, we'll re=examine that.

your ideas would be appreciated.

frank. ng0n.

July 1996

Original source file: netsig.9607

Source: http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.9607

1. Re: [NETSIG:2743] need advise on BPQ/DxCluster/NetRom/Ping

From: "Karl F. Larsen" <k5di@acca.nmsu.edu>
Date: Mon, 1 Jul 1996 05:35:40 -0600
To: netsig@tapr.org
Message-ID: <199607011135.FAA14182@acca.nmsu.edu>
Rendered body type: text/plain

At 10:30 PM 6/30/96 -0500, you wrote:
>thanks everyone for your help with my 'hot' mfj tnc. i moved the voltage
>regulator over to the 'bulkhead' for heatsinking, and things are running
>cooler now ! my 'lockup' problem was actually in the MITREK. had a
>'flakey' channel element connection among other things. ka0xh, our
>MITREK master fixed it ... thank god.
>
>now that our system is back up we're trying to refine the dxcluster
>feed from internet. n0cwr is the leavenworth,ks dxcluster server
>that gets a feed from wu3v via our internet gateway. he is linked
>to another server in lenexa, ks. this dxcluster system serves
>25 users.
>

We get our outside dx cluster data from wu5v direct to our gateway.
Since there are so many places to fail in the link we just let it go. You
can ping via the cluster software and tell if wu5v is there. But it doesn't
tell you what's wrong...)

My advice is to keep cool and wait for things to improve. They
usually do.

Karl F. Larsen ---- k5di@acca.nmsu.edu --- <http://rever.nmsu.edu/~k5di/> -->

2. Re: [NETSIG:2743] need advise on BPQ/DxCluster/NetRom/Ping

From: jcm7181@usl.edu (Jim Moore)
Date: Mon, 1 Jul 1996 09:27:07 -0500
To: netsig@tapr.org
Cc: <paxton@sound.net>
Message-ID: <v01540b00adfd49d17928@[130.70.43.63]>
Rendered body type: text/plain

>now that our system is back up we're trying to refine the dxcluster
>feed from internet. n0cwr is the leavenworth,ks dxcluster server
>that gets a feed from wu3v via our internet gateway. he is linked
>to another server in lenexa, ks. this dxcluster system serves
>25 users.
>
>here's the problem: perhaps you can help.
>
>wu3v(the feed source) occasionally drops. n0cwr gets
>to the gateway via netrom and then issues an 'axip' command to
>get to wu3v through a preconfigured 'wormhole'. when wu3v drops at his
>end, the netrom connection between the gateway (kc3ol) and n0cwr stays up !
>as it does NOT drop, the BPQ software at n0cwr doesn't realize the feed is
>lost and
>does NOT try to reaquire wu3v until the netrom circuit fails.
>
>1> i know jnos but NOT BPQ or DxCluster. can n0cwr PING wu3v through
> an 'axip' wormhole to determine when/if the link fails ? is there
> a 'ping' function of some kind in BPQ or DxCluster ?
>
>2> are netrom connections supported through 'axip' wormholes ? a 'total' netrom
> route would be self policing.
>
>3> any ideas ?
>
>i know some of you will ask " Why not just NETROM all the way
>through to wu3v ? That way if wu3v drops then n0cwr will reaquire.
>
>that's been tried and what seems to happen is that the link is
>'too long' and other problems creep in enough to have caused us
>to go to the present configuration. but, we'll re=examine that.
>
>your ideas would be appreciated.
>

>frank. ng0n.

Frank the best way to avoid this is not to use netrom, digipeat all the way, lacking that we can set up a repeat command to do a disc/f wu3v and I will run a reset on that repeat command to 0 (zero). The net result is if my stream is not up to reset that command, within a set timeout value, the cluster node on your end will disconnect my stream. I am using this on about 3 or 4 other connections and it works well.

By the way the occasional "drops" have been traced to software problems in a isdn router at the isp and been resolved.

73 de Jim WU3V...

~

James C. Moore PE
University of Southwestern Louisiana
Communication Department
jim@usl.edu Internet e-mail
318-482-6141 Office
318-482-6101 Fax

3. Re: [NETSIG:2742] Re: X1J pinged me to death!

From: healy@sierra.net (Bill Healy)
Date: Mon, 01 Jul 1996 11:39:11 +0000
To: netsig@tapr.org
Message-ID: <199607012340.AA18795@diamond.sierra.net>
Rendered body type: text/plain

>Well, if you can point him (or his callsign) this way, it'd help. Yes,
>the magic appears to be in the MSYS ARP declarations. We've tried
>several iterations, but we keep getting the same repetitions to ICMP
>frames.
>

>I'm going to try to monitor the 2m freq (I'm on UHF only) and see
>what's going on btwn the MSYS board and the X1J node.

John, MSYS only runs in Datagram mode. Make sure the X1J nodes ARP entry for the BBS is set to DG. That will fix things. Also make sure you're sending the the BBS in DG mode.

Bill N8KHN

4. Re: [NETSIG:2746] Re: X1J pinged me to death!

From: John Zantek <wx3k@gw.wx3k.ampr.org>
Date: Mon, 1 Jul 1996 19:46:20 -0500 (CDT)
To: netsig@tapr.org, msys@hamnet.org
Message-ID: <199607020046.TAA28665@tapr.org>
Rendered body type: text/plain

At 06:49 PM 7/1/96 -0500, Bill Healy wrote:

>>John Zantek/WX3K's having problems with his X1J returning
>>multiple ICMP frames to a single ping request, routed via
>>an intermediary MSYS box.
>

>John, MSYS only runs in Datagram mode. Make sure the X1J nodes ARP entry for
>the BBS is set to DG. That will fix things. Also make sure you're sending
>the the BBS in DG mode.
>

Yippee! N8KHN wins the prize!

I set the 2m X1J node's ARP statement for the intermediary MSYS box to 'DG' vice 'VC'. I then originated a single ping from my TNOS box on 70cm and routed it via the MSYS box.

One ping.

One echo with an not-too-shabby-considering-the-hardware RTT.

Just ONE echo, not 50.

It works. Try it! Ping 1cuj9.ampr.org [44.98.2.43]. It should come out my gw.wx3k.ampr.org, hit kd6zz.ampr.org (MSYS), then bump into the 1CUJ9 x1j node....then return to you. I'd be interested in hearing about RTTs.

73 John

5. FreeWave (was Wavelan cards...)

From: Jeff King <jeff@mich.com>
Date: Sun, 07 Jul 1996 15:16:58 -0400
To: netsig@tapr.org
Message-ID: <1.5.4.32.19960707191658.00676bf0@mich.com>
Rendered body type: text/plain

(Crosspost from ss@tapr.org)

At 08:27 PM 7/4/96 -0500, Thomas Barefoot wrote:
>I would like to know more about how you are linked to the internet by ss,
>Jeff. Please e-mail me more info at barefeet@ns.awanet.com
>

I'm using a set of FreeWave DGR-115 presently in a point to point configuration. These are frequency hopping spread spectrum radios on the 902-928mhz band. Power output is +25dBm (400mw) and RX sensitivity is -110 dBm@10-4 raw BER. Over the air speed is 173 kbaud which spools down to 115 kbaud RS-232 connector. There are 115 frequencies it hops to, and dwell time is on the order of 35ms. I'm running PPP through them now. Measured latency of the radios is around 40ms.

Presently, I'm operating them under Part 15 rules. My link consists of the following hardware. At the ISP (mich.com) I have a DGR-115 connected to a vertical antenna at about 35 feet. The radio is connect to a LINUX box running the PPP damon. I've also used it with a Livingston Port Master in the past. At my office end, I have a 6 element Yagi at about 40 feet. I'm presently just using Winsocks on a WIN95 box but plan on linking my LINUX and/or my CISCO in. The link distance is about 2 miles and is not line of site due to the 60-80 foot trees that are between us. My throughput with a FTP (to the local host at the other end of the link) is about 8.1 kbytes a second.

I've done some demos at computer clubs around the area also. With a 'back of set' antenna I can get about a 1 mile range inside buildings (to the ISP). To a car, about 3-4 miles. I've not done to many point to point tests but the manufactuer claims 20 miles range. I think Dewayne Hendricks has run a set of them 25 miles, but he has mountains :-). I'll be putting in a 11.7 mile K-12 link for dial-ups later this month in the thumb area of Michigan and can report back on that (its flat, wooded and with some hills).

We've also used them on both the Ann Arbor hamgate (wb8tkl) and the Oakland County hamgate (wb8wka). Worked well at the Ann Arbor hamgate but had some problems at the Oakland County hamgate due to low antenna and terrain. You need good coax, and a close to line of site path. They will penetrate trees fairly well but won't go through the side of a hill (although if the hill to were bare, you might get some knife edge).

I've also operated them in a multipoint configuration using a Livingston Port master as the hub going to 4 different radios hooked to Macs and PC's all running various flavors of Netscape. Performance seemed good.

BTW, I've spoken with the manufacturer about arranging a group buy of there OEM board (<http://www.freewave.com/dgro.html>) which is almost the same as what I have save the case and RS-232 level conversion. Depending on the number interested, pricing could be \$500 or less. Please e-mail be if your interested.

Hope that answers your questions.
Regards,

Jeff King
jeff@mich.com
Linked to the internet via spread spectrum

6. Re: Link Analysis

From: Jeff King <jeff@mich.com>
Date: Wed, 10 Jul 1996 20:30:18 -0400
To: Rick Whiting <rwhiting@winternet.com>
Cc: ss@tapr.org, netsig@tapr.org
Message-ID: <1.5.4.32.19960711003018.006fd9f8@mich.com>
Rendered body type: text/plain

At 06:51 PM 7/10/96 -0500, Rick W0TN wrote:
>Jeff,
>
>What link analysis program do you use?
>
>73/Rick W0TN

The topo 'program' I use is a excel spread sheet I got off of <http://www.gate.net/~dlung/indexftp.html> . Its got versions for lotus also. I've used various link analysis programs but around here (Michigan) its often hard to get a line of site path. With the graph function of EXCEL, I can get a good idea of the fresnel zones and I can play "what if's" with antenna heights. Note, you do need a topographical map to enter the data. I understand there are CD-ROM databases with all the topographical data already in them but I believe they are expensive (\$2000+ ??).

Regards,

Jeff King
jeff@mich.com
Linked to the internet via spread spectrum

7. Arizona State Convention

From: "Daniel J. Meredith" <DMeredith@CELL1.COM>
Date: Thu, 11 Jul 96 13:05:38 MST
To: <bbssig@tapr.org>, <netsig@tapr.org>, <f6fbb-list@phx-az.com>, <tcpaz@azgate.nj7p.ampr.org>
Message-ID: <vines.cQJ8+GuJtlA@BAMATEMPE.CELL1.COM>
Rendered body type: text/plain

For those of you that trek out to Arizona for the traditional Ft. Tuthill Hamfest and the 1st Annual Arizona State Convention, I would like to cordially invite you to attend the Arizona Digital Networking Meeting.

Date: 7/20/96
Time: 8:00-9:30 A.M.
Location: Ft. Tuthill Hamfest, Flagstaff, Arizona

Topics: Freq. Coordination
Network Updates
Network Buildouts
TCP/IP Network Issues/Updates
BBS Issues/Updates/Buildouts
Open Forum

This meeting is sponsored by: Arizona Network Intertie Group
Amateur Radio Council of Arizona

I hope to see everyone that is attending Tuthill there....

Daniel J. Meredith - N7MRP
Az VHF/UHF Digital Coordinator

8. Digital Communications Conference

From: Rick Whiting <rwhiting@winternet.com>
Date: Thu, 18 Jul 1996 20:25:41 -0500 (CDT)
To: ham-digital@ucsd.edu, hfsig@tapr.org, netsig@tapr.org
Message-ID: <199607190125.UAA19842@absolut-zero.winternet.com>
Rendered body type: text/plain

1996 ARRL and TAPR Digital Communications Conference
September 20-22, 1996
Seattle, Washington (minutes from SeaTac airport)

Web: <http://www.tapr.org>

It's that time again! Time to make your travel plans and put the finishing touches on your work for the upcoming 15th Annual ARRL and TAPR Digital Communications Conference. This year marks the first year in which the ARRL Digital Communications Conference and TAPR Annual General Meeting have joined into one conference!

The ARRL and TAPR Digital Communications Conference is an international forum for radio amateurs in digital communications, networking, and related technologies to meet, publish their work, and present new ideas and techniques for discussion. Presenters and attendees will have the opportunity to exchange ideas and learn about recent hardware and software advances, theories, experimental results, and practical applications. The Digital Communications Conference is not just for the digital expert, but

for digitally-orientated amateurs of all levels of experience.

The 1996 ARRL and TAPR Digital Communications Conference will be held on September 20-22, 1996 in Seattle, Washington. This year's conference location is just minutes away from the SeaTac (Seattle/Tacoma) Airport.

Not only is the Digital Communications Conference technically stimulating, it is a weekend of fun for all who have more than a casual interest in any of the ham digital communications modes. This includes BBS operators, networkers, DX-Cluster Sysops, software writers, modem designers, and digital satellite communications enthusiasts. The ARRL and TAPR Digital Communications Conference is for all levels of digital operators -- a must conference to attend to get active on a national level. Now, more than ever, amateur radio needs this great meeting of the minds, since it is important that we demonstrate a continued need for the frequency allocations we now have by pushing forward and documenting our achievements. The ARRL and TAPR Digital Communications Conference is one of the few ways to record our accomplishments and challenge each other to do more.

A Conference for the Beginner as well

The conference is not just for the digital expert. This year's conference will again provide an entire morning with beginning and intermediate presentations on selected topics in digital communications. Some of the topics will include: APRS, Satellite Communications, TCP/IP, Digital Radio, Spread Spectrum and other introductory topics. Come to the conference and hear these topics presented by the experts! Don't miss this opportunity to listen and talk to others in this area.

Workshops

In addition to the presentation of papers on Friday and Saturday, three workshops will be held during the conference. On Friday, Keith Sproul, WU2Z, will hold a workshop on APRS packet-location software. Keith is the Chair of the TAPR APRS Special Interest Group, developer of the Macintosh and more recent co-developer of the Windows95 version of APRS, and a leader in the area of APRS technology. This is a unique opportunity to gain insight into this fast growing new digital aspect of amateur operations that combines computers, packet radio, and GPS (Global Positioning Satellites). On Sunday, Dewayne Hendricks, WA8DZP, will conduct a workshop focusing on "How to utilize Part 15 wireless Radios for Ham Applications." Dewayne is an expert in the area of commercial wireless systems; his company WarpSpeed Imagineering, focuses on wireless Internet connectivity. This workshop presents an opportunity to learn how Personal Communications Technology (handheld and small business wireless systems) can be used in the amateur service. A second Sunday workshop will focus on Wireless Networking using the WA4DSY 56K RF modem Technology. This workshop will focus on the technology and accessories of creating and maintaining 56K networks using the WA4DSY modem and equipment compatible with it such as routers, digital driver cards, transverters, and repeaters. Use of WA4DSY 56K equipment in the 219-220 band will also be discussed.

1st Annual ARRL and TAPR DCC Student Papers Award

ARRL and TAPR especially welcome papers from full time students to compete for the first annual student papers award. Two \$500 travel awards will be given, one in each of the following categories: a) best technical/theory-oriented paper by a student, and b) best educational or community-oriented application paper by a student. The paper should relate directly to a wireless digital communication topic (see guidelines for more information). Papers coauthored by educators or telecommunications professionals are also eligible for this award, as long as a student is the first author. First year awards have been funded through a grant by The ARRL Foundation, Inc. Deadline for receipt of finished student paper manuscript: June 11, 1996. Please note that this deadline is different than the general conference submission date. For full details and paper guidelines contact TAPR or check <http://www.tapr.org>.

Call for Papers

Anyone interested in digital communications is invited to submit a paper for

publication in the Conference Proceedings. Presentation at the Conference is not required for publication. If you know of someone who is doing great things with digital communications, be sure to personally tell them about this! Papers are due by July 23, 1996, and should be submitted to Maty Weinberg, ARRL, 225 Main Street, Newington, CT 06111 or via the Internet to lweinberg@arrl.org. Information on paper submission guidelines are available on-line (<http://www.tapr.org>).

Local Co-Hosts

The 1996 ARRL and TAPR Digital Communications Conference is co-hosted by the Puget Sound Amateur Radio TCP/IP Group and Boeing Employees Amateur Radio Society (BEARS).

The Puget Sound Amateur Radio TCP/IP group is an informal group involved in an ongoing project to build and expand an amateur radio digital network in the greater Puget Sound area of the Pacific Northwest US. The Washington Experimenters TCP/IP Network (WETNET) uses TCP/IP as its primary transport protocol and currently has over 250 users. WETNET is linked to other amateur radio TCP/IP networks via the Internet. The Boeing Employees Amateur Radio Society (BEARS) is a general interest amateur radio club for employees of the Boeing Company, headquartered in Seattle, Washington. The BEARS are an active amateur club, supporting radio classes, VHF/UHF repeaters, and digital communications. BEARS has been instrumental in the construction of the Evergreen Intertie, an extensive network of interconnected repeaters in the Pacific Northwest.

What can you expect during the 1996 ARRL and TAPR Digital Communications Conference ?

- * A full day of papers and breakouts on Saturday for the beginner to the advanced amateur digital enthusiast.
- * Three workshops
 - Friday (4pm) - APRS, Conducted by Keith Sproul, WU2Z
 - Sunday (8am) - How to utilize Part 15 Radios for Ham Applications,
Conducted by Dewayne Hendricks, WA8DZP
 - Sunday (noon) - Wireless Networking using the WA4DSY 56K RF modem Technology
- * The first annual Student paper session.
- * A banquet with Special Guest Speaker Lyle Johnson, WA7GXD
Lyle was one of the founders of TAPR and instrumental in forming many of the current aspects of Amateur Digital Communications. He is currently very active in building several digital aspects of the upcoming Phase 3D satellite.
- * SIGs (Special Interest Groups) on Saturday following the banquet.
- * Informal get-togethers throughout the weekend.
- * A meeting facility that is perfect for this type of meeting.
- * Vendor area and informal engineering discussions/demonstrations.
- * An event at which the most important new developments in amateur digital communications are announced.
- * Digital 'movers and shakers' from all over the world in attendance.
- * Plenty of Washington State hospitality!

Conclusion

If you have attended a Digital Communications Conference in the past, just remember back to how much fun it was discussing the latest developments into the wee hours! If you have never been, then make your plans now to attend and find out how much fun the Digital Communications Conference can be.

There are few activities where the importance of your participation can be so much fun and important! What a great way to share and renew your enthusiasm for digital amateur radio! Getting together with colleagues from all over the world and bringing each other up to date on your latest work.

All this, and more, for an unforgettable weekend of ham radio and digital communications. Make your travel and lodging arrangements now. We hope to see you at the ARRL and TAPR Digital Communications Conference on September 20-22!

Full information on the conference and hotel information can be obtained by contacting Tucson Amateur Packet Radio, 8987-309 E. Tanque Verde Road #337, Tucson, AZ 85749-9399. Phone: (817) 383-0000. Fax: (817) 566-2544. Internet: tapr@tapr.org Web: www.tapr.org

Sincerely,

Steve Ford, WB8IMY, ARRL Conference Co-Chair
Keith Justice, KF7TP, TAPR Conference Co-Chair
Steve Stroh, N8GNJ, Local Host Liaison
Greg Jones, WD5IVD, President TAPR

Note: If you need handouts or flyers for meetings, contact TAPR about getting what you need!

Hotel Information

Conference presentations, meetings, and workshops will be held at the Quality Inn Seattle Airport, a complex co-located with the Radisson Hotel Seattle Airport. Rooms rates are \$66/single-double and \$76/triple. When making reservations with the hotel, be sure to indicate you are attending the ARRL and TAPR DCC conference. It is highly recommended that you book your room prior to arriving - a block of 75 rooms is reserved until September 6th, 1996. After the 75 rooms are booked, rooms will only be available in the Radisson hotel, but will be at a higher price. Be sure to book your rooms early! The hotel provides transportation to and from SeaTac Airport. You should contact the hotel to arrange airport transportation.

Quality Inn Seattle Airport (conference hotel)
17101 Pacific Highway South, Seattle, WA, 98188
(206) 246-7000, Fax (206) 246-1715

Radisson Hotel Seattle Airport (alternate hotel)
17101 Pacific Highway South, Seattle, WA, 98188
(206) 244-6000, Fax (206) 246-6835

Registration

Contact the TAPR office by Phone, Fax, or e-mail (Internet: tapr@tapr.org) to preregister or for additional meeting information. MasterCard and VISA accepted.

- Preregistration (before Sept 1st) \$40.00 *
- Late Registration or at door \$45.00 *
- * - Conference Registration includes:
Conference Proceedings, Sessions, Meetings, and Lunch.
- Saturday Evening Dinner (Limited Space) \$19.00 **
- ** - Dinner, Speaker: Lyle Johnson, WA7GXD, Prize Drawing

Workshops

APRS Workshop
Friday, 4pm - 7pm. Conducted by Keith Sproul, WU2Z

- Registration \$15.00

How to utilize Part 15 Radios for Ham Applications Workshop, Sunday, 8:00am - 11:00am. Dewayne Hendricks, WA8DZP

- Registration \$15.00

Wireless Networking using the WA4DSY 56K RF modem Technology Workshop

Sunday, 12noon - 3pm.

- Registration \$15.00

Contact TAPR to register for the DCC.
Tucson Amateur Packet Radio, 8987-309 E. Tanque Verde Road #337, Tucson, AZ
85749-9399. Phone: (817) 383-0000. Fax: (817) 566-2544.
Internet: tapr@tapr.org http://www.tapr.org

Richard A. (Rick) Whiting Phone: + 1 612 550 1213
5780 Rosewood Ln. N. E-mail: rwhiting@winternet.com
Plymouth, MN 55442-1411 Packet: W0TN @ WB0GDB.MN.USA.NOAM
INDEPENDENT PROFESSIONAL CONSULTANT - TELECOMMUNICATIONS & WIRELESS

9. node site ripped off

From: bholmen@cp.duluth.mn.us (Bruce Holmen)
Date: Mon, 22 Jul 1996 06:31:51 -0500
To: netsig@tapr.org
Message-ID: <199607221131.GAA26216@CP.Duluth.MN.US>
Rendered body type: text/plain

If this is not the proper mail list to post this I ask your
forgiveness in advance.

The following items were recently taken from a repeater hub
site in northwestern Wisconsin. Please pass on this information.

100 watt Micor VHF repeater crystallized for 146.700 MHz
100 watt Motrac UHF repeater crystallized for 443.850 MHz
VHF Sinclair Reslock duplexer
UHF Sinclair Reslock duplexer
SCOM 5K controller programmed with the callsign N0BZZ
30 amp switching power supply
Uniden AMH150 transceiver crystallized for 145.070 MHz

PacComm Tiny-2 TNC with node firmware (WIMP N0BZZ-3)
Note this node name and call will not be reused to aid in
identifying the missing equipment.

This was a professional job and a fair amount of work would
have to go into returning this equipment back to commercial
operation. The thieves took their time and knew exactly what
they were doing.

Are radio sites in your area being ripped off? How well
protected is your remote site? Think about it before the
fact. Is this going to become a growing problem?

Personally emailed comments are welcome.

Bruce Holmen email bholmen@cp.duluth.mn.us

10. (no subject)

From: olecam@imaginet.fr (Olivier Le Cam, F5MZN)
Date: Mon, 22 Jul 1996 15:22:12 +0200
To: netsig@tapr.org
Message-ID: <199607221322.PAA27543@icaria.imaginet.fr>
Rendered body type: text/plain

Hello there,

I'd to install a gateway packet to internet (via a phone line - to a
provider). This is to connect an internet packet cluster during
internationnal HF contest.

I am thinking about a JNOS but I think it is not especially designed to open
a tcp/ip session via a phone line to a provider.

I wonder is there anybody who is familiar with a such system (JNOS, LINUX,
WINDOWS 95 ...) and could help me.

Many thanks.

Olivier,
F5MZN.

Olivier Le Cam
Email : olecam@imaginet.fr (or f5mzn@imaginet.fr)
AX25 : F5MZN@F6KPF.FBRE.FRA.EU

11. Re: [NETSIG:2752] node site ripped off

From: Bob Merritt <bobm@mindspring.com>
Date: Mon, 22 Jul 1996 11:09:51 -0400
To: netsig@tapr.org
Message-ID: <199607221513.LAA28988@answerman.mindspring.com>
Rendered body type: text/plain

At 06:41 AM 7/22/96 -0500, you wrote:

>
>Are radio sites in your area being ripped off? How well
>protected is your remote site? Think about it before the
>fact. Is this going to become a growing problem?
>
A few years back we had an entire GRAPES switch site disappear... they
cleaned out the whole cabinet... computer, pi cards, transverters and 56k
modems...

Site was very remote and almost inaccessible, except to anyone with a 4WD
vechicle...

So it is a growing problem I guess....

73/Good Luck
Bob

Bob Merritt KA4BYP
bobm@mindspring.com
<http://www.mindspring.com/~bobm>

12. Re: [NETSIG:2754] Re: node site ripped off

From: Dave Wolf <wo5h@tapr.org>
Date: Mon, 22 Jul 1996 11:26:36 -0700
To: netsig@tapr.org
Message-ID: <31F3C7DC.6DFD@tapr.org>
Rendered body type: text/plain

Here's a thought from a different angle:

Maybe the thieves were other amateurs wishing to silence the node stack,
and not individuals wishing to resell the equipment.

If these were unintelligent thieves, they might be more likely to grab
the radios, computers and maybe the duplexers, and generally leave a mess
instead of excising the whole installation thoroughly and cleanly.

It's my opinion that emotion is a greater motivator for misdeeds than
money.

Back in the 70s, a commercial broadcaster I worked for suddenly went off
the air. Upon examination of the remote site, it was discovered that the
exciter had been stolen. Someone knew that without the exciter, the radio
station would be off the air. The first thought was that it was stolen to
be resold. Then a note came in the mail from some small group that was
upset that the station had changed formats. The FBI got involved, but
never discovered who was responsible, and the exciter was never
recovered.

Dave W05H

13. Re: [NETSIG:2753]

From: "Karl F. Larsen" <k5di@acca.nmsu.edu>
Date: Mon, 22 Jul 1996 11:44:34 -0600
To: netsig@tapr.org
Message-ID: <199607221744.LAA09723@acca.nmsu.edu>
Rendered body type: text/plain

At 08:34 AM 7/22/96 -0500, you wrote:
>Hello there,
>
>I'd to install a gateway packet to internet (via a phone line - to a
>provider). This is to connect an internet packet cluster during
>internationnal HF contest.
>

Oliver many Ham Radio Gateway's are now using a pc with Linux and
the TNOS version od NOS. All the software is freeware and supported by the
author's.

73 de karl aka k5di

>Olivier,
>F5MZN.
>
>
>
>-----
>Olivier Le Cam
>Email : olecam@imaginet.fr (or f5mzn@imaginet.fr)
>AX25 : F5MZN@F6KPF.FBRE.FRA.EU
>-----
>
>
Karl F. Larsen ---- k5di@acca.nmsu.edu --- <http://rever.nmsu.edu/~k5di/> -->

14. Message not deliverable

From: ADMINISTRATOR@MAF.Org
Date: Tue, 23 Jul 96 16:11:00 UTC
To: netsig@tapr.org
Message-ID: <9606238381.AA838144064@gabriel.maf.org>
Rendered body type: text/plain

Hello there,

I'd to install a gateway packet to internet (via a phone line - to a
provider). This is to connect an internet packet cluster during
internationnal HF contest.

I am thinking about a JNOS but I think it is not especially designed to open
a tcp/ip session via a phone line to a provider.

I wonder is there anybody who is familiar with a such system (JNOS, LINUX,
WINDOWS 95 ...) and could help me.

Many thanks.

Olivier,
F5MZN.

Olivier Le Cam
Email : olecam@imaginet.fr (or f5mzn@imaginet.fr)
AX25 : F5MZN@F6KPF.FBRE.FRA.EU

15. Message not deliverable

From: ADMINISTRATOR@MAF.Org
Date: Tue, 23 Jul 96 16:10:41 UTC
To: netsig@tapr.org
Message-ID: <9606238381.AA838144061@gabriel.maf.org>
Rendered body type: text/plain

At 06:41 AM 7/22/96 -0500, you wrote:

>
>Are radio sites in your area being ripped off? How well
>protected is your remote site? Think about it before the
>fact. Is this going to become a growing problem?
>
A few years back we had an entire GRAPES switch site disappear... they
cleaned out the whole cabinet... computer, pi cards, transverters and 56k
modems...

Site was very remote and almost inaccessible, except to anyone with a 4WD

vechicle...

So it is a growing problem I guess....

73/Good Luck

Bob

Bob Merritt KA4BYP

bobm@mindspring.com

<http://www.mindspring.com/~bobm>

16. Message not deliverable

From: ADMINISTRATOR@MAF.Org

Date: Tue, 23 Jul 96 16:11:54 UTC

To: netsig@tapr.org

Message-ID: <9606238381.AA838144070@gabriel.maf.org>

Rendered body type: text/plain

If this is not the proper mail list to post this I ask your forgiveness in advance.

The following items were recently taken from a repeater hub site in northwestern Wisconsin. Please pass on this information.

100 watt Micor VHF repeater crystallised for 146.700 MHz
100 watt Motrac UHF repeater crystallised for 443.850 MHz
VHF Sinclair Reslock duplexer
UHF Sinclair Reslock duplexer
SCOM 5K controller programmed with the callsign N0BZZ
30 amp switching power supply
Uniden AMH150 transceiver crystallised for 145.070 MHz

PacComm Tiny-2 TNC with node firmware (WIMP N0BZZ-3)
Note this node name and call will not be reused to aid in identifying the missing equipment.

This was a professional job and a fair amount of work would have to go into returning this equipment back to commercial operation. The thieves took their time and knew exactly what they were doing.

Are radio sites in your area being ripped off? How well protected is your remote site? Think about it before the fact. Is this going to become a growing problem?

Personally emailed comments are welcome.

Bruce Holmen email bholmen@cp.duluth.mn.us

17. Message not deliverable

From: ADMINISTRATOR@MAF.Org

Date: Tue, 23 Jul 96 16:11:28 UTC

To: netsig@tapr.org

Message-ID: <9606238381.AA838144067@gabriel.maf.org>

Rendered body type: text/plain

Here's a thought from a different angle:

Maybe the thieves were other amateurs wishing to silence the node stack, and not individuals wishing to resell the equipment.

If these were unintelligent thieves, they might be more likely to grab the radios, computers and maybe the duplexers, and generally leave a mess instead of excising the whole installation thoroughly and cleanly.

It's my opinion that emotion is a greater motivator for misdeeds than money.

Back in the 70s, a commercial broadcaster I worked for suddenly went off the air. Upon examination of the remote site, it was discovered that the exciter had been stolen. Someone knew that without the exciter, the radio station would be off the air. The first thought was that it was stolen to be resold. Then a note came in the mail from some small group that was upset that the station had changed formats. The FBI got involved, but never discovered who was responsible, and the exciter was never

recovered.

Dave W05H

18. Message not deliverable

From: ADMINISTRATOR@MAF.Org
Date: Tue, 23 Jul 96 16:14:03 UTC
To: netsig@tapr.org
Message-ID: <9606238381.AA838144073@gabriel.maf.org>
Rendered body type: text/plain

At 08:34 AM 7/22/96 -0500, you wrote:

>Hello there,

>

>I'd to install a gateway packet to internet (via a phone line - to a
>provider). This is to connect an internet packet cluster during
>international HF contest.

>

Oliver many Ham Radio Gateway's are now using a pc with Linux and
the TNOS version od NOS. All the software is freeware and supported by the
author's.

73 de karl aka k5di

>Olivier,

>F5MZN.

>

>

>

>-----

>Olivier Le Cam

>Email : olecam@imaginet.fr (or f5mzn@imaginet.fr)

>AX25 : F5MZN@F6KPF.FBRE.FRA.EU

>-----

>

>

Karl F. Larsen ---- k5di@acca.nmsu.edu --- <http://rever.nmsu.edu/~k5di/> -->

19. Re: [NETSIG:2756] Re:

From: olecam@imaginet.fr (Olivier Le Cam, F5MZN)
Date: Wed, 24 Jul 1996 14:26:55 +0200
To: netsig@tapr.org
Message-ID: <199607241226.OAA15962@icaria.imagnet.fr>
Rendered body type: text/plain

> Oliver many Ham Radio Gateway's are now using a pc with Linux and
>the TNOS version od NOS. All the software is freeware and supported by the
>author's.

Hi Karl,

Thanks for your reply. Got some other information wich are adree with yours.
I know what I've to do now.

Thank you again.

Best 73.

Olivier,
F5MZN.

>-----

Olivier Le Cam

Email : olecam@imaginet.fr (or f5mzn@imaginet.fr)

AX25 : F5MZN@F6KPF.FBRE.FRA.EU

>-----

20. G8BPQ Puzzler

From: "Leslie D. Taylor" <ldt@teleport.com>
Date: Wed, 24 Jul 1996 16:03:33 -0700 (PDT)
To: netsig@tapr.org
Message-ID: <Pine.SUN.3.92.960724154435.6114A-100000@kelly.teleport.com>
Rendered body type: text/plain

Help! I am trying to configure a node using a Data Engine running
BPQ code. I have run out of ideas to troubleshoot this problem. I have a
KPC-4 running in KISS mode attached to the DE serial port. When I connect

to the node via the KPC-4, I get the connect text just fine. But, any command that I send to the node results in a line that starts with: SALEM (KC7KFE-1)} and then a bunch of garbage characters, the same string of garbage no matter what the command. It is acting like it is sending the Invalid command message. It won't even respond to bye!

I have tried a different Data Engine, one with an EPROM that (I think) was in operation at one time. I have also tried a KPC-3. That seems to narrow it down to the cable between the KPC and the DE. Or, maybe something in the setup of the KPC before it was put into KISS mode?

Have any of you seen anything like this before? Do you have any suggestions for other troubleshooting attempts? This is a real hair puller! Thanks for any help with this.

G8BPQ version 4.07a for Data Engine

73,
Les, N7TE

ldt@teleport.com
N7TE@KC7KFE.#SALEM.OR.USA.NOAM

21. Alinco DR130TPKT radio

From: Gary Crum <crum@www.kb7eec.ampr.org>
Date: Sat, 27 Jul 96 17:15:44 -0600
To: netsig@tapr.org
Message-ID: <9607272315.AA00552@www.kb7eec.ampr.org>
Rendered body type: text/plain

So, what do people think of the Alinco DR130TPKT radio? How fast is it at keying up, i.e., how short of a TX Delay parameter can be used when the radio is used for 9600bps packet radio? (I don't know of any frequency synthesized radios that can be used with a TXD under 150ms, but the crystal controlled radio that I use can accomodate TXD way down there, at 60ms or less.)

I just noticed that the DR130 is available for only \$200 and is ready for 9600bps packet radio, I guess. The AES price listing says "9600W" but maybe they mean "9600bps" or "9600 baud". See:

This line is from the web page <http://www.aesham.com/alinco.html>
ALI DR130TPKT ALINCO 50W 2M/NO MIC/9600W/MOD 214.000 199.950

Even if it is not fast at keying up, it sounds interesting.

22. Re: [NETSIG:2764] Alinco DR130TPKT radio

From: Dino Darling <dinod@deltanet.com>
Date: Sat, 27 Jul 1996 21:23:31 -0700
To: netsig@tapr.org
Message-ID: <1.5.4.32.19960728042331.0069d62c@mail.deltanet.com>
Rendered body type: text/plain

At 06:35 PM 7/27/96 -0500, you wrote:

>So, what do people think of the Alinco DR130TPKT radio? How fast is it at
>keying up, i.e., how short of a TX Delay parameter can be used when the
>radio is used for 9600bps packet radio? (I don't know of any frequency
>synthesized radios that can be used with a TXD under 150ms, but the crystal
>controlled radio that I use can accomodate TXD way down there, at 60ms or
>less.)

>

>I just noticed that the DR130 is available for only \$200 and is ready for
>9600bps packet radio, I guess. The AES price listing says "9600W" but
>maybe they mean "9600bps" or "9600 baud". See:

>

>This line is from the web page <http://www.aesham.com/alinco.html>
>ALI DR130TPKT ALINCO 50W 2M/NO MIC/9600W/MOD 214.000 199.950

>

>

>Even if it is not fast at keying up, it sounds interesting.

>

Hello Gary. I remember being REAL excited about the DR-1200T radio. I even published the factory approved mods on the Packet Network for this radio. (That bulletin even made it on the QRZ CD-ROM...look mom, I'm famous!)

None of the Japanese radios work well at 9600. (Good, but not well.) The ONLY exception to this rule would be the all-mode radios and the Yaesu 736-R. I (we) bought 4 of the 1200s and performed the mods. They

worked...sometimes. I won't be the ginney pig this time :-)

I would like to see comments on the MFJ radio AND the new TEN-TEC radio kit! Wouldn't it be great if someone could really do a once over on the TEN-TEC radio, send those mods into TEN-TEC and see if they would adopt them into the next revision of that radio?! Just think, TEN-TEC would find a nich market, Digital Amateurs could have fun BUILDING their own DATA RADIO, and Packet would reap the benefits! Just think how many 9600 modems whould be sold if a real data radio was available. We are turning the tides here in Southern CA. Its just a matter of time!

("Would Mr. Darling please get off the grandstand...") SORRY!

I too am waiting to hear replies to your message! 73!

Dino Darling...KC6RIX
dinod@deltanet.com

23. help ! need advise on spectral purity - MITREK

From: frank paxton iii <paxton@sound.net>
Date: Sun, 28 Jul 1996 19:01:51 -0500
To: netsig@tapr.org
Message-ID: <31FBFF6F.502F@sound.net>
Rendered body type: text/plain

problem: MITREK 9600 baud data radio WAS intermitant, but NOW has developed a nice array of 'birdies' at regular intervals on each side of the transmit frequency. no amount of tuning will remove them. tuning procedure is that perscribed by MOTOROLA. any ideas ?
frank. ng0n.

24. Re: [NETSIG:2766] help ! need advise on spectral purity - MITREK

From: Mike Fahmie <MPFahmie@lbl.gov>
Date: Tue, 30 Jul 1996 15:02:32 -0700
To: netsig@tapr.org
Message-ID: <199607302205.PAA20554@mh1.lbl.gov>
Rendered body type: text/plain

At 07:25 PM 7/28/96 -0500, you wrote:
>problem: MITREK 9600 baud data radio WAS intermitant, but NOW has
>developed a nice array of 'birdies' at regular intervals on each side
>of the transmit frequency. no amount of tuning will remove them.
>tuning procedure is that perscribed by MOTOROLA. any ideas ?
>frank. ng0n.
>

Make certain that you are not overloading your analyzer, easy way to tell is to decrease its input level. If the birdies go down faster than the input then they are probably not real, but the result of overload.

-Mike-

Mike Fahmie - Advanced Light Source
Lawrence Berkeley National Laboratory
(510) 486-4030 - MPFahmie@lbl.gov
WA6ZTY @ N6EEG

August 1996

Original source file: netsig.9608

Source: http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.9608

1. Re: [NETSIG:2763] G8BPQ Puzzler

From: Victor Kean <70004.1645@CompuServe.COM>
Date: 10 Aug 96 02:04:19 EDT
To: "INTERNET:netsig@tapr.org" <netsig@tapr.org>
Message-ID: <960810060418_70004.1645_FHT37-1@CompuServe.COM>
Rendered body type: text/plain

Les: did you ever get any help with your DE/BPQ/KISS problem? If not, I might be able to assist. I run a few node stacks with that configuration. If you are interested, reply with a copy of your config file, and I'll modify it using my understanding of the appropriate configuration.

Vic, K1LT
Columbus, Ohio

2. Re: [NETSIG:2768] Re: G8BPQ Puzzler

From: "Leslie D. Taylor" <ldt@teleport.com>
Date: Mon, 12 Aug 1996 15:48:24 -0700 (PDT)
To: netsig@tapr.org
Message-ID: <Pine.SUN.3.92.960812153533.5098A-100000@linda.teleport.com>
Rendered body type: text/plain

On Sat, 10 Aug 1996, Victor Kean wrote:

> Les: did you ever get any help with your DE/BPQ/KISS problem? If not, I might
> be able to assist. I run a few node stacks with that configuration. If you are
> interested, reply with a copy of your config file, and I'll modify it using my
> understanding of the appropriate configuration.
>
> Vic, K1LT
> Columbus, Ohio
>

Yes, Vic, one of the local guys (Hank, W0RLI) came up with a suggestion that worked. I just had to do a hard reset of the Data Engine (disconnect the internal battery). I didn't realize and maybe others also don't that the memory that is backed up by the battery is apparently used by the BPQ software. That was a good lesson to learn. Thanks for the offer of help.

73,
Les, N7TE
ldt@teleport.com

3. Re: help ! need advise on spectral purity - MITREK

From: wb9mjn@wb9mjn.ampr.org
Date: Fri, 16 Aug 96 06:42:20 UTC
To: netsig@tapr.org
Message-ID: <10830@wb9mjn.ampr.org>
Rendered body type: text/plain

Hi,

My first guess, based on the problem and the particular radio, would be that the transmitter filter between the exciter and PA has an open ground. The MITREK radios have a history of problems with the aluminum cased helical resonator assembly. Usually, its receive sensativity that is compromised by a cracked solder joint in the resonator assembly, but a transmitter problem of a christmas tree birdie pattern would also be likely, if the transmitter portion of the resonator assembly had a cracked ground solder joint.

Get a BIG soldering iron, and go over all the solder joints in the resonator assembly, and reflow the solder connections, applying extra solder. If u have a very bad joint, and must clean it , you will need special solder from Motorola, to retin the tabs.

I ve seen a christmas tree birdie problem on a TEKK 900 radio before, too. In this case, the problem turned out to be a solder blob, that was shorting the emitter to ground of a class C predriver, about 1/4 inch from the emitter lead. The impedance of the blob was not enuf at 440 Mhz to short things out, but it lead to a mismatch situation. The initial check of the radio showed no problem, but when it arrived here locally it had the Christmas Tree pattern of spurs. The blob was tear drop shapped, and when it impacted on the ground portion of the circuit board, it flattened, melting thru the conformal coating on

the ground portion. The tail of the tear drop blob folded over, still pointy, and froze just as the tip of the tail touched the trace that lead to the predriver emitter. Initially the conformal coating at the sharp tail of the blob was not cut, and the radio passed QA. But, in shipping, vibration caused the sharp blob tail to cut thru the conformal coating, and the spurs were the result. In the end, a flick of a finger nail removed the blob, and the radio then worked.

Check thru the PA and driver sections of the MITREK for solder blobs. Remove any and all stray flux patches, as they could be holding a solder blob or stringer in place, as well as hiding it from plain sight.

73, Don.

Mailbox : WB9MJN @ N9HSI.IL.USA.NA
AMPRNet : wb9mjn@wb9mjn.ampr.org[44.72.98.19]
Internet: wb9mjn%wb9mjn.ampr.org@uugate.aim.utah.edu

4. Re: [NETSIG:2770] reply to wb9mjn - spectral purity MITREK

From: frank paxton iii <paxton@sound.net>
Date: Fri, 16 Aug 1996 12:33:07 -0500
To: wb9mjn@wb9mjn.ampr.org
Cc: netsig@tapr.org
Message-ID: <3214B0D3.5A63@sound.net>
Rendered body type: text/plain

don:

thanks for the VERY detailed suggestions on fixing my MITREK.
i DID manage to pull a wire off one of the CAPICITORS in the filter between the exciter and the pa, but i THOUGHT i'd soldered it back in correctly and all was ok.... i'll RECHECK that.

as for solder blobs, etc on PA and EXCITER... that's been checked, but i'll TRY AGAIN.

i now have another MITEK that will be converted to replace this one. once we get this one fixed we'll have a backup for our VERY busy internet gateway.

thanks again for taking the time and trouble to write your VERY HELPFUL e-mail.

i'll let you know how it works out.

5. Data Radio Standard Test Methods Web Page

From: burt lang <burt@roccler.qc.ca>
Date: Tue, 20 Aug 1996 00:37:33 -0700
To: netsig@tapr.org
Message-ID: <32196B3D.1F99@roccler.qc.ca>
Rendered body type: text/plain

This is to announce the opening of a Web Site devoted to establishing a Standard Set of Test Methods for testing radios intended for data service.

<http://www.roccler.qc.ca/burt/>

The Data Radio Standard Test Methods project was started some 2 years ago and was presented at the 14th ARRL Digital Communications Conference in Texas in Sept 95. At the conference it was received with great interest.

The proposed test method documents were finished and sent to selected organizations for review at the beginning of this year. I have now completed the transfer to the Web.

Warning: The documents are quite technical and don't have glitzy graphics or animation. Nor is the site just a bunch of links to other sites. It is just pure original technical documentation.

I welcome comments and constructive criticism. Bear in mind as with any new web document, that there are probably numerous minor bugs in the html markup that I have not yet detected. Also in the next few weeks, it will be undergoing frequent refinements.

PROJECT SLOGAN:

Let's Put the Radio back in Packet Radio!!!!

6. Motorola SINCOM

From: bewhite@ibm.net
Date: Wed, 21 Aug 96 14:43:25
To: netsig@tapr.org
Cc: rose@rats.org
Message-ID: <9608212147.AA0031@localhost>
Rendered body type: text/plain

A packet group on the south coast of VK2 has some Motorola SINCOM UHF transceivers which they wish to use on 70cm on the backbone. Is there any information, modifications, eprom info and experience with converting theses radios ?

73
Barry VK2AAB @ VK2WI
bewhite@ibm.net

September 1996

Original source file: netsig.9609

Source: http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.9609

1. Re: [BBSSIG:3052] Motorola Mitrek

From: John Ackermann <jra@febo.com>
Date: Wed, 04 Sep 1996 19:24:43 -0400
To: bbssig@tapr.org, netsig@tapr.org
Message-ID: <199609042324.TAA31177@ag9v.ampr.org>
Rendered body type: text/plain

(As Barry suggested in his message, I'm cc'ing this to the NETSIG group.)

I've been working on trying to get a Mitrek running at 19.2kB to be compatible with our Kantronics D4-10 radios. The verdict so far: well, maybe.

To be compatible with the D4-10, the TX needs to be capable of +/-10kHz FSK. It can do this with enough drive voltage (nearly 12 volts of low impedance drive is needed), but the channel element is AC coupled, so there is a potential for baseline wander. I don't know if this will be a problem in practice or not.

The circuit I have lashed together at the moment is really simple... just a transistor switch keyed by the TTL data line, running with three stages of RC low pass filter directly into the modulation input of the channel element. I'm using 100 ohm series resistance, and .022 shunt to ground, in the RC filters and this seems to generate an output waveform that's within FCC spec and looks on a spectrum analyzer "sort of" like the D4 transmit waveform (since the D4 uses brute-force FSK, and not G3RUH filtering, the waveform matching shouldn't be the issue that it is for 9600 with the RUH modems).

Doing 19.2 with G3RUH modems should be a snap if you can generate a few volts of audio to shove directly into the channel element, bypassing the TX audio strip with its pre-emphasis and splatter filter.

The RX is another matter. There are 4 10.7 MHz crystal filters in the IF strip that determine selectivity, and I haven't been able to find any source for these filters with significantly wider (like 60kHz) bandwidth.

It may be possible to use 10.7MHz ceramic filters with suitable impedance matching, but I haven't had a chance to try that yet, and even there I haven't found filters with the ideal bandwidth, though I suspect they would be available if you knew where to look.

My secret plan was to replace the entire Mitrek IF strip and detector with a reverse engineered Kantronics D4 receiver IF and detector strip, which isn't a big deal as it's a single chip MC3362 design. We have a schematic put together, but the guy who was going to do the layout has sort of disappeared from the scene. This would work nicely, as it would allow use of the Mitrek's excellent front end, first mixer, and LO in conjunction with the wideband IF and detector. Since the Mitrek first IF is 10.7 MHz, and that's the second IF of the D4, it should fit together nicely.

So, all we need to do is get someone to do a board layout and build up a prototype, and see if it all works...

Again, using G3RUH modems instead of straight FSK would reduce the RX bandwidth required, but I still think you'd have trouble finding 10.7MHz crystal filters to do the job.

Finally, turnaround time is a question. My test bed is a full duplex repeater (I hope to get the Mitrek TX in service there within the next couple of weeks), so turnaround isn't a major issue for me at this stage. I've heard that the Mitreks are pretty quick, and they use a small reed relay for antenna switching, so the turnaround time might be OK in half duplex mode. The issues are the speed of the relay, and a keyup delay circuit in the TX that I thought was longer, but which the Mitrek manual says is only 15ms -- noticeable, but not a killer.

73,
John AG9V
jra@febo.com

> Greetings All:
>
> Can anyone tell me if the Mitrek Line from Motorola is capable of
> transmitting 19.2, 38.4, or better yet 57.6 K baud. I am considering

> obtaining a few for some experimental full duplex VHF/UHF links and wonder if
> anyone knows or has tried one at a higher speed than 9600.
> If there is someone out there who knows about these units and is willing to
> part with them at a reasonable price, please let me know.
>
> 73 - Mark,
> @aol.com
> KB6ZVP @KB6ZVP.#LIN.NC.USA.NOAM
> @K0-23, K0-25, U0-22
>
>
>

2. Re: [NETSIG:2774] Re: [BBSIG:3052] Motorola Mitrek

From: "Karl F. Larsen" <k5di@acca.nmsu.edu>
Date: Thu, 5 Sep 1996 06:41:15 -0600
To: netsig@tapr.org
Message-ID: <199609051241.GAA08654@acca.nmsu.edu>
Rendered body type: text/plain

At 06:52 PM 9/4/96 -0500, you wrote:

>(As Barry suggested in his message, I'm cc'ing this to the NETSIG group.)

>

>I've been working on trying to get a Mitrek running at 19.2kB to be compatible
>with our Kantronics D4-10 radios. The verdict so far: well, maybe.

>

>To be compatible with the D4-10, the TX needs to be capable of +/-10kHz FSK.
>It can do this with enough drive voltage (nearly 12 volts of low impedance
>drive is needed), but the channel element is AC coupled, so there is a
>potential for baseline wander. I don't know if this will be a problem in
>practice or not.

>

>The circuit I have lashed together at the moment is really simple... just a
>transistor switch keyed by the TTL data line, running with three stages of RC
>low pass filter directly into the modulation input of the channel element.
>I'm using 100 ohm series resistance, and .022 shunt to ground, in the RC
>filters and this seems to generate an output waveform that's within FCC spec
>and looks on a spectrum analyzer "sort of" like the D4 transmit waveform
>(since the D4 uses brute-force FSK, and not G3RUH filtering, the waveform
>matching shouldn't be the issue that it is for 9600 with the RUH modems).

>

>Doing 19.2 with G3RUH modems should be a snap if you can generate a few volts
>of audio to shove directly into the channel element, bypassing the TX audio
>strip with its pre-emphasis and splatter filter.

>

>The RX is another matter. There are 4 10.7 MHz crystal filters in the IF
>strip that determine selectivity, and I haven't been able to find any source
>for these filters with significantly wider (like 60kHz) bandwidth.

>

>It may be possible to use 10.7MHz ceramic filters with suitable impedance
>matching, but I haven't had a chance to try that yet, and even there I haven't
>found filters with the ideal bandwidth, though I suspect they would be
>available if you knew where to look.

>

I found some 10.7 MHz ceramic filters with 100 kHz bandwidth. They
are used in car fm radios. Not sure about the impedance matching but it's
got to be simpler than a new board...Look in digikey and other places. The
ceramic filters were like a buck and very small.

>My secret plan was to replace the entire Mitrek IF strip and detector with a
>reverse engineered Kantronics D4 receiver IF and detector strip, which isn't a
>big deal as it's a single chip MC3362 design. We have a schematic put
>together, but the guy who was going to do the layout has sort of disappeard
>from the scene. This would work nicely, as it would allow use of the Mitrek's
>excellent front end, first mixer, and LO in conjunction with the wideband IF
>and detector. Since the Mitrek first IF is 10.7 MHz, and that's the second IF
>of the D4, it should fit together nicely.

>

>So, all we need to do is get someone to do a board layout and build up a
>prototype, and see if it all works...

>

>Again, using G3RUH modems instead of straight FSK would reduce the RX bandwidth
>required, but I still think you'd have trouble finding 10.7MHz crystal filters
>to do the job.

>

>Finally, turnaround time is a question. My test bed is a full duplex repeater
>(I hope to get the Mitrek TX in service there within the next couple of
>weeks), so turnaround isn't a major issue for me at this stage. I've heard

>that the Mitreks are pretty quick, and they use a small reed relay for antenna
>switching, so the turnaround time might be OK in half duplex mode. The issues
>are the speed of the relay, and a keyup delay circuit in the TX that I thought
>was longer, but which the Mitrek manual says is only 15ms -- noticeable, but
>not a killer.

We have set txdelay on our Mitrek to 65 msec and had no problems.
Not sure why we didn't try 15.

73, karl

>
>73,
>John AG9V
>jra@febo.com
>
>> Greetings All:
>>
>> Can anyone tell me if the Mitrek Line from Motorola is capable of
>> transmitting 19.2, 38.4, or better yet 57.6 K baud. I am considering
>> obtaining a few for some experimental full duplex VHF/UHF links and wonder if
>> anyone knows or has tried one at a higher speed than 9600.
>> If there is someone out there who knows about these units and is willing to
>> part with them at a reasonable price, please let me know.
>>
>> 73 - Mark, @aol.com
>> KB6ZVP @KB6ZVP.#LIN.NC.USA.NOAM
>> @KO-23, KO-25, UO-22
>>
>>
>
>
>
Karl F. Larsen ---- k5di@acca.nmsu.edu --- <http://acca.nmsu.edu/~k5di/> -->

3. Need Xtal Filter

From: rbenny@ccmsmtp.CBCPH.NAVY.MIL
Date: Thu, 05 Sep 96 16:12:54 PST
To: netsig@tapr.org
Message-ID: <9608058419.AA841965174@ccmsmtp.CBCPH.NAVY.MIL>
Rendered body type: text/plain

Would anyone have an Xtal Filter, Y20 (10.7 Mhz)for a Maxtor 80 VHF
radio?
Mine is bad and I'm figuring this group would be the most likely to
have a spare.

Please reply to: jbenny@rain.org

Tnx, Ray, N6VR

4. A question about TheNet X1H

From: Jg <jgg@exit109.com>
Date: Fri, 06 Sep 1996 00:16:00 -0400
To: netsig@tapr.org
Message-ID: <3.0b15.32.19960906001557.006791f4@hiway1.exit109.com>
Rendered body type: text/plain

Hi...

I am currently running this version of the netrom code.... I have a
question about locking a problem user out of the node system. In all of the
docs at my disposal, there is nothing about locking out a user. Would
anyone be able to help me on this problem?

Thanks!

John WT3V

jgg@exit109.com
WT3V @ WT3V.NJ.USA.NOAM

5. Re: [NETSIG:2777] A question about TheNet X1H

From: Travis W Burton - KB5ILY <tburton@wolfdenswsc.k12.ar.us>
Date: Fri, 6 Sep 1996 04:41:30 -0500 (CDT)
To: Jg <jgg@exit109.com>
Cc: netsig@tapr.org

John, Although I use TheNet 2.08B and not X1 I think the answer would be to use the ACL command. Here is the section from OVERVIEW.TXT.

3.21 ACL

This is probably the most complex additional command in the program. It should be used with care, and only when you really understand its operation - mistakes can result in the need to go out to a remote site (probably when it is cold and wet) to reconfigure the node.

The command allows selective control, based on callsign, of a list of different events. The ACL contains two types of entry, a default value and zero or more callsigns, each of which are associated with a value. When one of the controlled events occurs (such as an incoming level 2 connection or a nodes broadcast), the ACL is scanned for an entry that matches the callsign of the sender. If a match is found (but see below), the value associated with that callsign is used to determine the action the node will take. If no match is found, the default value is used.

An ACL function mask is provided. This enables specific ACL functions to be disabled to speed up the node. Each bit of the mask enables (if set) or disables (if clear) the corresponding function. For example, if the mask is set to 2, the node will only check its ACL for outgoing level 2 connections.

Each bit of the value or mask controls a different function, as shown below :

BIT	OPERATION
=====	
0	bar incoming level 2 connection
1	bar outgoing level 2 connection (downlink)
2	ignore nodes broadcasts from this station
3	bar gatewaying at level 3 to/from this station
4	bar incoming level 4 connections
5	bar outgoing level 4 connections
6	ignore SSID in matching an entry

So if for example an entry exists for a callsign G99XXX of 6, then the node will not allow outgoing level 2 connections to the node (downlinks), and will ignore node broadcasts from that station. Note that these commands only operate on the events themselves - if G99XXX creates a level 2 connection, the node will quite happily use it itself.

The 'ignore ssid' bit is used to match a callsign without regard to its SSID. This makes life interesting when finding a match, so the list is scanned twice, once for an exact match, and then for a match ignoring SSID if an exact match is not found. There can only be one exact match, but when searching for a match without using SSID, the first entry found will be used.

The syntax of the command is as follows (4 versions)

```
ACL * value
ACL & value
ACL callsign + value
ACL callsign -
```

If you are not sysop, or if ACL is given on its own, the current contents of the ACL are shown. The first form of the command changes the default value, the second form sets the mask enable value, the third makes an entry in the list, and the last form removes an entry from the list. It complains about syntax errors.

A few moments thought will show that the sequence of commands

```
connect to node
```

```
execute sysop or manager command
type the command ACL * 127
type the command ACL & 127
disconnect
```

is quite catastrophic. You will not be able to get back in again apart from via the host port and noone will be able to connect to or from the node. If you intend to experiment with the command, you should start by entering your own call sign with a value of zero to ensure that you can get back in again !!!.

The list can be used as an 'accept' or 'reject' list by judicious use of the default. To create a list that excludes specific calls, put them into the list with the required bits set in the value. The default should be zero. To create an 'accept' list, put entries in with the required bits zero and set the corresponding bits in the default. Individual bits may be used to create accept or reject lists for each function.

The command steals buffers at a rate of one buffer per four entries in the ACL. Also, a long ACL will slow the node down nicely - so think before you enter a long list.

This command is for experimental purposes - if you find any bugs, let me know please (I have not fully tested the gateway bit for example). Also, it is not intended for malicious use but to allow fine control to be exercised over backbone networks. If I get lots of negative responses back, the command will go !

The mask value should be set so that only those functions actually being used are enabled. For example, if the node has an ACL set to control level 2 uplinks and downlinks, it will also check its ACL for all other controlled operations such as level 3 gatewaying. This will result in much time being wasted searching the list for a result that is going to always succeed. In the example cited therefore, the mask would be set to 3. On reset, the mask value is set to zero, SO ALL ACL FUNCTIONS ARE DISABLED AND MASK MUST BE SET TO ENABLE THEM !.

-----eof overview.txt

On Thu, 5 Sep 1996, Jg wrote:

```
> Hi...
>
> I am currently running this version of the netrom code... I have a
> question about locking a problem user out of the node system. In all of the
> docs at my disposal, there is nothing about locking out a user. Would
> anyone be able to help me on this problem?
>
> Thanks!
>
> John WT3V
>
> jgg@exit109.com
> WT3V @ WT3V.NJ.USA.NOAM
>
```

--

```
73 De Travis W. Burton, KB5ILY / Prescott AR 71857-2505
Assistant Administrator, Wolf Den Project
Amateur Packet Radio: KB5ILY @ KB5ILY.SWAR.AR.USA.NOAM
Internet: mailto:tburton@wolfdenswsc.k12.ar.us
WWW: http://wolfdenswsc.k12.ar.us/~tburton/
GOD BLESS THE UNITED STATES of AMERICA
```

Only he who Attempts the Ridiculous can Achieve the Impossible. (WILL HENRY)

6. The NET X1H question

```
From: Jg <jgg@exit109.com>
Date: Fri, 06 Sep 1996 05:49:33 -0400
To: netsig@tapr.org
Message-ID: <3.0b15.32.19960906054930.00682670@hiway1.exit109.com>
```

Rendered body type: text/plain

Just wanted to say thanks to all who responded to my question regarding locking someone out of the node system. I guess the ALC command is the ticket !!

Thanks again!

John WT3V

7. Re: [NETSIG:2778] Re: A question about TheNet X1H

From: John Gubernard <jtg@intac.com>
Date: Fri, 6 Sep 1996 09:25:52 -0400 (EDT)
To: netsig@tapr.org
Message-ID: <Pine.BSD/.3.91.960906092518.7453A-100000@nile.intac.com>
Rendered body type: text/plain

I need to know how to remove myself from the mailing list. Please help me.

John D. Gubernard

8. Linux and Clover?

From: "Michael A. Burke" <mburke@llajta.nrc.bolnet.bo>
Date: Fri, 6 Sep 1996 23:30:48 -0400
To: NETSIG@tapr.org
Message-ID: <199609061935.XAA12712@llajta.nrc.bolnet.bo>
Rendered body type: text/plain

Hi there ...

Anyone know of a driver for the HAL PCI4000 that will run with LINUX?

73 de Mike

... Mike

9. Re: A question about TheNet X1H

From: wgun@juno.com (Walter Gunstrom III)
Date: Fri, 6 Sep 1996 16:24:11 PST
To: netsig@tapr.org
Cc: jtg@intac.com
Message-ID: <19960907.012538.5231.0.wgun@juno.com>
Rendered body type: text/plain

On Fri, 6 Sep 1996 08:27:41 -0500 (CDT) John Gubernard <jtg@intac.com> writes:

>I need to know how to remove myself from the mailing list. Please
>help me.

>

>John D. Gubernard

>

>

This should do it....

To unsubscribe from this mailing list send a message to
`listserv@tapr.org`
with the following line in the body of the message:

signoff netsig

73 de Walt kb8poa....

10. Hexipus connections

From: Mark <mharloff@spacetechnology.com>
Date: Sat, 07 Sep 1996 14:57:49 -0400
To: netsig@tapr.org
Message-ID: <3231C5AD.6E37@spacetechnology.com>
Rendered body type: text/plain

Hello to all..

I am assembling a network using a diode matrix ring and several PacComm tncs running X1J4. I also run FBB/BPQ on a 386 machine. The problem I have is that the tncs will talk to each other fine thru the ring. However, when I connect the 386 to the ring, it stalls everything. The 386 will talk to each tnc when connected directly. I gather the problem is in the cable between the 386 and the ring, however I am not exactly sure what to do with it!!

Any suggestions would be much appreciated.

73, Mark / KB2TXP <mharloff@spacetech.com>

11. An Age Old Question

From: "Ralph T. Stetson, III KD1R" <rstetson@crossnet.org>
Date: Sat, 07 Sep 96 15:47:30 -0500
To: "netsig@tapr.org" <netsig@tapr.org>
Message-ID: <m0uzRR8-000TJZC@hlc>
Rendered body type: text/plain

-- [From: Ralph T. Stetson, III KD1R * EMC.Ver #2.5.02] --

Greetings all Ralph Stetson, KD1R here in Westford, Vermont.

I have been running a Packet bbs system here now for about 14 years or so.
Starting out with an ole Xerox 820 W0RLI system in late 83 I think it was...
.The pieces are still in the garage.

I later upgraded to the DOS world and am still locked into that realm due to hardware considerations.

Currently I am running PRMBS and find it quite interesting to use and fairly powerful yet quite user friendly.....Much the same way RLI has been known for years....

I looked briefly at MYSYS and rejected it as to unstable a platform although I understand quite a few folks use it...

AA4RE was a consideration at one time..But I would rather play with a system that is still getting the support of the author at least.....I understand rightly or wrongly that Roy is not currently supporting the program.

That leaves FBB....

Can any of you SYSOPS who have had experience with any other operating system besides FBB Please tell me why it would be in the best interest of my users and myself to change to FBB....

Never mind the glitter stuff of running in win95 etc....

How reliable is the compressed forwarding, How stable is the mail handler? Those kind of issues...

Also most importantly how does it stack up to other systems in ease of set up....That last one is a bomb folks.....considering all the help me messages I see daily on the system.....

I realize as with any new system there will be a learning curve and that is not an issue.

The tangible facts are here at KD1R I have the following equipment to work with...

386DX/33 4 Meg Ram (two)

486SX/33 2 MEg Ram (one)

Running under BPQ408a with three radio ports.

Each computer is assigned to either a PBBS or DxCluster Function. All are interconnected on a wire LAN to each other using BPQ ware.

Actual TNC's are DRSI Cards at 1200 and 4800 baud.

All the current and future software will run in Desqview windows

As I understand it all the above software is capable of running on any of the above machines.

thanks for your respective help

de

Ralph Stetson KD1R

943 Osgood Hill Road

Westford, VT

05494

rstetson@crossnet.org

kd1r@kd1r.#nwt.vt.usa.noam

--

The past is our Heritage.

The present is our Responsibility.

The future is our Challenge.

12. Re: [NETSIG:2784] An Age Old Question

From: rmackay@cycor.ca (Ron VE1AIC)
Date: Sat, 7 Sep 1996 18:40:25 -0300
To: netsig@tapr.org
Message-ID: <199609072140.SAA02626@bud.peinet.pe.ca>
Rendered body type: text/plain

>-- [From: Ralph T. Stetson, III KD1R * EMC.Ver #2.5.02] --

>

>Also most importantly how does it stack up to other systems in ease of set

>up...That last one is a bomb folks.....considering all the help me
>messages I see daily on the system....
>

Ralph you cant beat FBB (DOS). It does (just about) everything, its easy to setup and maintain, and best of all is reliable. I have 2 running here with multiple ports, BPQ, Netrom & EtherNet and it runs & runs without crashing or other problems.
Compressed fwding is very reliable as well.
I've run it on 286 with 1 meg or 2 meg as well as 386DX with 4 meg no problems.
73 - Ron

13. TEKK Radios/KPC9612 at 19.2!

From: John Ackermann <jra@febo.com>
Date: Sat, 07 Sep 1996 19:56:28 -0400
To: netsig@tapr.org
Message-ID: <199609072356.TAA11614@ag9v.ampr.org>
Rendered body type: text/plain

Just wanted to report the results of some early testing of the TEKK 2W radios, modified by PacComm for 19.2 (wider RX filters), used with the Kantronics KPC9612 dual port TNC.

It works! I was a bit concerned because, although we knew that the 9612 would do 19.2 on the radio port, I didn't know if it would do an analog G3RUH signal, or only the Kantronics TTL signal as used in the Data Engine for 19.2 with the D4 radios.

It turns out that the 9612 uses a single chip modem design that apparently does both 9600 and 19.2 analog signals, and the unit provides TTL level signals as well. So that's one less thing to worry about...

After some initial problems (more on those below) we had a pair of stations talking back and forth across the basement at 19.2 with very good results.

Here are the problems we encountered:

1. Some quality control issues with the radios. We ordered 8 radios on 4 different frequencies, all modded for 19.2. 2 radios had extremely poor sensitivity, as if the front end was dead. 2 others had their cases swapped, so they weren't on the frequencies the labels said they were. This pair of problems cost us an hour or two...
2. We're running 6kHz deviation, figuring that if 3kHz is right for 9600, double that ought to work at 19.2. Setting the deviation with the pot in the TNC is very touchy -- there's a jumper that selects hi or low level output, with a pot to provide adjustment over the two ranges. As you'd expect, the right value is kind of between ranges; we had to use the high output jumper setting, but the pot had to be very near the bottom, and was very touchy.
3. We received absolutely no documentation with the radios. Since we didn't know where the TX level pot in the radio is, we didn't try to mess it. It would be nice if the radios shipped with some basic info...
4. The KPC9612 supports only up to 19.2 on the serial port, so that's a bit suboptimal for 19.2 on the radio port (I like to run the serial link at least 2x the radio speed).
5. We haven't yet figured out if the KPC9612 can do G8BPQ. There's apparently a "K-net" ROM available and the docs indicate that this is NET/ROM compatible, but we need to investigate that some more. Anyone out there experienced with K-net? Can it integrate with a G8BPQ network?

Anyway, we're encouraged with the results of the day's work. This hardware is going into service for SKYWARN in this area, to link the local voice spotting networks with the ham station at the NWS office. We're using the existing SW Ohio backbone, with this new gear off the various backbone access sites to provide dedicated links to the various SKYWARN locations. It looks like this hardware will do the trick.

73,
John AG9V
jra@febo.com

14. Re: [NETSIG:2786] TEKK Radios/KPC9612 at 19.2!

From: "Nate Bargmann" <nbargman@ns.fullnet.net>
Date: Sun, 8 Sep 1996 03:16:52 -0500
To: netsig@tapr.org

Hi John and all.

Here is a topic that I have some questions about, deviation settings with higher speed data rates. It seems to me that we should be running just enough deviation to provide an adequate voltage to the modem from the discriminator. The standard has more-or-less been set at +/- 3 kHz for 9600 bps. Whether this is too much or just right, I haven't yet got my TEKK back to run some tests.

According to what I know the KPC-9612 uses the G3RUH modem @ 9600 bps. I'm not too well up on the particulars of the modem, but from the locals I helped set deviation with the service monitor it seems the KPC-9612 is using a 4800 Hz waveform for the 9600 bps data stream. Using these numbers the modulation index works out to $(3 \text{ kHz} / 4.8 \text{ kHz}) = .625$, quite low compared to narrowband FM voice with a modulation index of $(5 \text{ kHz} / 3 \text{ kHz}) = 1.67$.

> 2. We're running 6kHz deviation, figuring that if 3kHz is right for 9600,
> double that ought to work at 19.2. Setting the deviation with the pot in the
> TNC is very touchy -- there's a jumper that selects hi or low level output,
> with a pot to provide adjustment over the two ranges. As you'd expect, the
> right value is kind of between ranges; we had to use the high output jumper
> setting, but the pot had to be very near the bottom, and was very touchy.

With the above in mind and using my trusty calculator and assuming the 19.2 kbps data stream is using a 9600 Hz carrier, John's mod index works out to exactly the same as the presently used standard for 9600 bps $(6 \text{ kHz} / 9.6 \text{ kHz} = .625)$. Since the data carrier frequency is fixed by the data rate the only way mod index would change is with a change of the system deviation. Since discriminators are a fairly linear circuit, it would stand to reason a constant mod index is required to maintain a given voltage to the receiver of the modem. (I guess sitting here thinking about this has revealed the key to this mystery!) Also, I've thought of this more and recalling deviation setting of analog microwave systems it clicks now that as max mod frequency increases, system deviation must increase to maintain mod index (duh!).

I guess I may as well complete this with a discussion of system bandwidth of 9.6 and 19.2 kbps packet compared to narrowband voice. Since Carson's Rule is the standard BW formula, I'll use it here.

$BW = 2(\text{Max Deviation} + \text{Max Modulating Frequency})$

Narrowband voice = $2(5 \text{ kHz} + 3 \text{ kHz}) = 16 \text{ kHz}$

9600 bps packet = $2(3 \text{ kHz} + 4.8 \text{ kHz}) = 15.6 \text{ kHz}$ (yes, 9600 IS legal on 2m!)

19.2 kbps = $2(6 \text{ kHz} + 9.6 \text{ kHz}) = 31.2 \text{ kHz}$ (definitely beyond 2m limit of 20 kHz, although the data rate would be legal if the BW were kept at 20 kHz (doesn't appear to be practical with FSK).)

So, I guess I've answered my own questions and am sharing the results of my ramblings :-)

>From the looks of things, it appears that 9600 bps *should* work with narrowband FM radios without modification. In practice it seems wider filters are needed since stock voice filters are non-linear enough to cause distortion to the received waveform. A solution, if practical would seem to be multi-carrier modems to increase data rate with only a modest increase in BW. Has this been tried, or does the training time such a modem might require negate these benefits?

At first I questioned the need to bump the deviation when going to a higher data rate, but now that I've run the numbers, the reason is clear. I hope my examples were clear enough to explain some of the 'why' as well. I enjoy the first rate discussions here, keep 'em coming and John keep us informed of your progress.

73, de Nate KA0RNY >>

nbargman@fullnet.net

Pattison's Law of Electronics
If more than one pair of wires are to be

connected, the first way blows the fuse.

15. 2 MTR 9600

From: Robert <w5robert@blkbox.COM>
Date: Sat, 7 Sep 1996 22:44:28 -0500 (CDT)
To: netsig@tapr.org
Message-ID: <9609072244.aa18240@blkbox.COM>
Rendered body type: text/plain

What is the radio of choice for 9600
on 2 meters??? We are abt to get a
9600 baud link hr!!YEAH!
--
73 Robert WB5CRG w5robert@blkbox.com

16. Re: [NETSIG:2787] Re: TEKK Radios/KPC9612 at 19.2!

From: Mike Curtis <wd6ehr@kaiwan.com>
Date: Sat, 7 Sep 1996 23:53:42 -0700 (PDT)
To: netsig@tapr.org
Message-ID: <Pine.SUN.3.93.960907234902.14391B-100000@kaiwan009.kaiwan.com>
Rendered body type: text/plain

> From the looks of things, it appears that 9600 bps *should* work with
> narrowband FM radios without modification. In practice it seems
> wider filters are needed since stock voice filters are non-linear
> enough to cause distortion to the received waveform. A solution, if
> practical would seem to be multi-carrier modems to increase data rate
> with only a modest increase in BW. Has this been tried, or does the
> training time such a modem might require negate these benefits?

Slight correction: you don't need WIDER filters. You need LINEAR filters.
They are available (have been for years), and work fine. MuRata has the
SFG455 and SFH455 lines, both of which I've tried in unruly radios, and
both of which work just fine. I've even used the narrower models, with
-6dB passbands of 7.5 kHz. Tuning and drift are problematic, but they
work great when you're "right on".

-- mike

17. Re: [NETSIG:2784] An Age Old Question

From: "Tom Moulton" <tmoulton@ram.net>
Date: Sun, 08 Sep 96 07:22:10 EDT
To: netsig@tapr.org, brian@lantz.com (Brian Lantz K04KS)
Message-ID: <15021573.294f@ram.net>
Rendered body type: text/plain

Brian

please give tom r access to CFGNEW.ZIP in incoming

Thomas A. Moulton, W2VY
w2vy@ram.net

18. Re: [NETSIG:2788] 2 MTR 9600

From: "Karl F. Larsen" <k5di@acca.nmsu.edu>
Date: Sun, 8 Sep 1996 05:54:26 -0600
To: netsig@tapr.org
Message-ID: <199609081154.FAA16015@acca.nmsu.edu>
Rendered body type: text/plain

At 10:57 PM 9/7/96 -0500, you wrote:
>What is the radio of choice for 9600
>on 2 meters??? We are abt to get a
>9600 baud link hr!!YEAH!
>--
>73 Robert WB5CRG w5robert@blkbox.com
>

I like the old Motorola Mitrex

karl k5di
Karl F. Larsen ---- k5di@acca.nmsu.edu --- <http://acca.nmsu.edu/~k5di/> -->

19. Re: [NETSIG:2790] Re: An Age Old Question

From: "Karl F. Larsen" <k5di@acca.nmsu.edu>
Date: Sun, 8 Sep 1996 07:13:42 -0600
To: netsig@tapr.org
Message-ID: <199609081313.HAA16457@acca.nmsu.edu>
Rendered body type: text/plain

Which Brian are you refering to Thomas? I suspect it's ucsc Brian.

At 06:34 AM 9/8/96 -0500, you wrote:

>Brian

>

>please give tom r access to CFGNEW.ZIP in incoming

>

>*****

>Thomas A. Moulton, W2VY

>w2vy@ram.net

>

>

Karl F. Larsen ---- k5di@acca.nmsu.edu --- <http://acca.nmsu.edu/~k5di/> -->

20. Re: [NETSIG:2789] Re: TEKK Radios/KPC9612 at 19.2!

From: "Nate Bargmann" <nbargman@ns.fullnet.net>
Date: Sun, 8 Sep 1996 14:33:22 -0500
To: netsig@tapr.org
Message-ID: <199609081434.JAA18586@ns.fullnet.net>
Rendered body type: text/plain

Hi Mike.

That was the subtle point I was trying to make, but didn't feel like going on another 2 or 3 paragraphs...harr!

> > From the looks of things, it appears that 9600 bps *should* work with
> > narrowband FM radios without modification. In practice it seems
> > wider filters are needed since stock voice filters are non-linear
> > enough to cause distortion to the received waveform. A solution, if
> > practical would seem to be multi-carrier modems to increase data rate
> > with only a modest increase in BW. Has this been tried, or does the
> > training time such a modem might require negate these benefits?
>
> Slight correction: you don't need WIDER filters. You need LINEAR filters.
> They are available (have been for years), and work fine. MuRata has the
> SFG455 and SFH455 lines, both of which I've tried in unruly radios, and
> both of which work just fine. I've even used the narrower models, with
> -6dB passbands of 7.5 kHz. Tuning and drift are problematic, but they
> work great when you're "right on".
>
>
>
>
> -- mike

This is definitely the case, but why? I guess the answer lies in the fact that the distortion that does exist from using these particular features aren't noticable on voice FM. Also, the manufacturers benefit from using a lower cost component since system performance isn't adversely affected. On the other hand, since we wish to use these radios for data we must replace the stock filters with ones that have a linear bandpass. I like the idea of 7.5 kHz since a lot of crud can be eliminated, yet I think most folks will use a 20 khz IF filter in the Mitrek, for example, since it makes the system more of a plug and play proposition.

I'm glad the pieces finally fell into place for me at least, and that's what ham radio is all about.

73, de Nate KA0RNY >>

nbargman@fullnet.net

Pattison's Law of Electronics
If more than one pair of wires are to be
connected, the first way blows the fuse.

21. Re: Deviation and Quality Control (lack of)

From: ssampson@othello.tinker.af.mil (Steve Sampson)
Date: Sun, 8 Sep 1996 10:45:31 -0500 (CDT)
To: netsig@tapr.org
Message-ID: <9609081545.AA11986@othello.tinker.af.mil>
Rendered body type: text/plain

As much as PacComm charges for the Tekk's, you'd think they might have calibrated them on the bench. The recent description of the quality of the work, really pisses me off. Since these radios are no longer stock, they should have two things as a minimum:

1. Documentation (schematic, text)
2. A calibration sheet (freq, pwr, rx center, etc).

Item #2 would quickly show problems and fail QC. Without #2 you're just putting trash in the mail, witness the end result quoted here on the sig. I was under the impression they did things like a good radio shop, now we know they are just swapping components and throwing them in a box (and sometimes not even the right box).

I don't think you can say that a 9600 waveform has only a 4800 hz component. It is an FSK waveform, swinging up and down as the scrambler takes affect. Without one or two modulating frequencies, you can throw out any easy modulation index and bandwidth formulas. I do know from experience, that too much deviation is very bad, very fast at 9600. We set up a couple at 3 kHz as depicted on a deviation meter I built for 1200 packet. Too hot. We needed to give it less to work. Does this mean we have less than 3 kHz deviation? No, it means my meter is crap for a scrambled FSK signal :-)

The other thing with TEKK's was the frequency error. We found that using an O-scope we could adjust the L0 to center on the other. This is a smooth adjustment on the TEKK, and an item to be calibrated by PacComm and others. It's just as easy to ship good quality, as it is to ship garbage. Since the stock TEKK filter is not wide, any offset in frequency (mere kilohertz) can throw you out the window on a wide signal like 9600 has.

Steve
mailto:ssampson@othello.tinker.af.mil
<http://www.oklahoma.net/~ssampson>

22. Re: [NETSIG:2793] Re: TEKK Radios/KPC9612 at 19.2!

From: Mike Curtis <wd6ehr@kaiwan.com>
Date: Sun, 8 Sep 1996 09:02:46 -0700 (PDT)
To: netsig@tapr.org
Message-ID: <Pine.SUN.3.93.960908085756.9786A-100000@kaiwan009.kaiwan.com>
Rendered body type: text/plain

On Sun, 8 Sep 1996, Nate Bargmann wrote:

> Hi Mike.
>
> That was the subtle point I was trying to make, but didn't feel like
> going on another 2 or 3 paragraphs...harr!

No problem (as I said, it was just a "slight" correction ;-)

> This is definitely the case, but why? I guess the answer lies in the
> fact that the distortion that does exist from using these particular
> features aren't noticable on voice FM. Also, the manufacturers
> benefit from using a lower cost component since system performance
> isn't adversely affected. On the other hand, since we wish to use
> these radios for data we must replace the stock filters with ones
> that have a linear bandpass. I like the idea of 7.5 kHz since a lot
> of crud can be eliminated, yet I think most folks will use a 20 khz
> IF filter in the Mitrek, for example, since it makes the system more
> of a plug and play proposition.

Yes it's cheaper to use filters with less poles, and the designs with less poles and steep skirts are unfortunately nonlinear. Fine for yakking, but bad when computers try to yak.

I wouldn't recommend 7.5 kHz filters, because drift on EITHER end becomes a real problem, as does deviation and other factors that can throw the signal outside the passband.

> I'm glad the pieces finally fell into place for me at least, and
> that's what ham radio is all about.

Works for me ;-)

-- mike

23. Re: [NETSIG:2794] Re: Deviation and Quality Control (lack of)

From: John Ackermann <jra@febo.com>
Date: Sun, 08 Sep 1996 18:05:02 -0400
To: netsig@tapr.org
Message-ID: <199609082205.SAA16700@ag9v.ampr.org>
Rendered body type: text/plain

>
> As much as PacComm charges for the Tekk's, you'd think they might
> have calibrated them on the bench. The recent description of the
> quality of the work, really pisses me off. Since these radios are
> no longer stock, they should have two things as a minimum:
>
> 1. Documentation (schematic, text)
> 2. A calibration sheet (freq, pwr, rx center, etc).
>
> Item #2 would quickly show problems and fail QC. Without #2 you're
> just putting trash in the mail, witness the end result quoted here
> on the sig. I was under the impression they did things like a good
> radio shop, now we know they are just swapping components and throwing
> them in a box (and sometimes not even the right box).

I've seen the same situation in lots of other places as well, so find it hard to get too PO'd about it. QC problems I can see. I really wonder, though, why the radio doc's seem so hard to come by.

One slightly humorous note... one of the guys involved in this project is a tech with H-P and works on their fancy RF and microwave measurement equipment. His basement had more neat toys than I've ever seen in my life, including multiple spectrum analyzers and network analyzers. What did we end up using to set the deviation? An old(er) service monitor with a scope display of deviation. The longest packet burst we could generate (with TXD set to max) was too short for the fancy equipment to lock on to! With the scope display, it was a snap to get things set in two or three packets.

> I don't think you can say that a 9600 waveform has only a 4800 hz
> component. It is an FSK waveform, swinging up and down as the
> scrambler takes affect. Without one or two modulating frequencies,
> you can throw out any easy modulation index and bandwidth formulas.
> I do know from experience, that too much deviation is very bad, very
> fast at 9600. We set up a couple at 3 kHz as depicted on a deviation
> meter I built for 1200 packet. Too hot. We needed to give it less
> to work. Does this mean we have less than 3 kHz deviation? No, it
> means my meter is crap for a scrambled FSK signal :-)

I use 4800 Hz as an easy reference point for the "worst case" spectrum as that represents a string of alternating 1s and 0s. In fact, you can get the DCD light on a TAPR/RUH/whatever modem to come on with a carrier modulated by a sine wave of 1/2 the bit rate.

> The other thing with TEKK's was the frequency error. We found that
> using an O-scope we could adjust the LO to center on the other. This
> is a smooth adjustment on the TEKK, and an item to be calibrated by
> PacComm and others. It's just as easy to ship good quality, as it is
> to ship garbage. Since the stock TEKK filter is not wide, any offset
> in frequency (mere kilohertz) can throw you out the window on a wide
> signal like 9600 has.

The radios seemed to be reasonably on frequency as shipped. Haven't had any experience with them over temperature changes, yet, so our next learning on the subject will be once we get them out to the sites. I predict we'll end up with some sort of temperature stabilization.

John

>
> ---
> Steve
> <mailto:ssampson@othello.tinker.af.mil>
> <http://www.oklahoma.net/~ssampson>
>

24. Re: [NETSIG:2787] Re: TEKK Radios/KPC9612 at 19.2!

From: John Ackermann <jra@febo.com>
Date: Sun, 08 Sep 1996 18:14:48 -0400
To: netsig@tapr.org
Message-ID: <199609082214.SAA16797@ag9v.ampr.org>
Rendered body type: text/plain

[Replying to Nate's comments on deviation for 9600 and 19.2]

Running lots of deviation intuitively seems like a good thing to do, but if you overdeviate you start running into the edge of the IF filters, and bad things happen. 3kHz seems to work well for 9600, though some folks suggest even a bit lower, like 2.5. I'm just doubling that for 19.2 with the RUH modem. (By the way, the Kantronics D4-10 radio uses a straight FSK modulation scheme, and it deviates +/- 10kHz for 19.2, effectively a modulation index of 1).

I don't know the nominal bandwidth of the replacement filters PacComm uses in their 19.2 mod, but I assume they're at least double the bandwidth of the stock filters, and possibly a bit more than that. If so that would yield just about the same "fit" of the modulating signal into the RX bandwidth as the standard 9600 setup using those radios.

John

25. Re: [NETSIG:2787] Re: TEKK Radios/KPC9612 at 19.2!

From: "John W.(Bill) Hays" <billh@netins.net>
Date: Sun, 08 Sep 1996 22:27:58 +0000
To: netsig@tapr.org
Message-ID: <3233486E.7338@netins.net>
Rendered body type: text/plain

Nate Bargmann wrote:

>
> Hi John and all.
>
much deleted
> I guess I may as well complete this with a discussion of system
> bandwidth of 9.6 and 19.2 kbps packet compared to narrowband voice.
> Since Carson's Rule is the standard BW formula, I'll use it here.
>
> $BW = 2(\text{Max Deviation} + \text{Max Modulating Frequency})$
>
> Narrowband voice = $2(5 \text{ kHz} + 3 \text{ kHz}) = 16 \text{ kHz}$
>
> 9600 bps packet = $2(3 \text{ kHz} + 4.8 \text{ kHz}) = 15.6 \text{ kHz}$ (yes, 9600 IS legal on 2m!)
>
> 19.2 kbps = $2(6 \text{ kHz} + 9.6 \text{ kHz}) = 31.2 \text{ kHz}$ (definitely beyond 2m
> limit of 20 kHz, although the data rate would be legal if the BW
> were kept at 20 kHz (doesn't appear to be practical with FSK).)
>
> So, I guess I've answered my own questions and am sharing the results
> of my ramblings :-)
>
More deleted

I learn more just reading the mail from this SIG than almost anywhere else!
TNX Nate and others...
73, Bill w0omv

26. Re: [NETSIG:2788] 2 MTR 9600

From: "John W.(Bill) Hays" <billh@netins.net>
Date: Sun, 08 Sep 1996 22:42:08 +0000
To: netsig@tapr.org
Message-ID: <32334BC0.533C@netins.net>
Rendered body type: text/plain

Robert wrote:

>
> What is the radio of choice for 9600
> on 2 meters??? We are abt to get a
> 9600 baud link hr!!YEAH!
> --
> 73 Robert WB5CRG w5robert@blkbbox.com
You should get the issue of QST that had and excellant article
about 9600 baud "ready" radios!!!! They were advertised as

being 9600 baud capable. However, the reality was a different story
If I am right only one radio was truly 9600 capable at the time
of the review. It was a Yaesu radio.
Since then MFJ has come out with a unit claimed to be 9600
ready, and I believe it is, but not sure.
I'm sure others will have a more definitive answer.

BTW subsequent reviews done by QST now include the specs
as to how the radio performs at 9600 baud.

73,
Bill

27. Re: 2 MTR 9600

From: aa7ya@juno.com
Date: Sun, 08 Sep 1996 19:51:15 EDT
To: netsig@tapr.org
Message-ID: <19960908.174836.5239.0.aa7ya@juno.com>
Rendered body type: text/plain

On Sun, 8 Sep 1996 06:55:51 UTC "Karl F. Larsen" <k5di@acca.nmsu.edu>
writes:

>At 10:57 PM 9/7/96 -0500, you wrote:
>>What is the radio of choice for 9600
>>on 2 meters??? We are abt to get a
>>9600 baud link hr!!YEAH!
>>--
>>73 Robert WB5CRG w5robert@blkbox.com
>>
> I like the old Motorola Mitrex

WOW!!! I wasn't sure that 9600 baud could be used on
2 meters! Maybe I missed something, somewhere,
somehow....

The thought of 9.6K baud gives me another option for
a backbone link up here, since most of the links are
on 145.010, and getting crowded.... Forget that 440
will make it happen, unless I have short hops to get
me to the existing Montana Backbone Network. That
involves (\$\$\$), something that I am short on.

73 - Stacey, AA7YA
aa7ya@juno.com
AA7YA@AA7YA.#NEMT.MT.USA.NOAM
aa7ya@aa7ya.ampr.org [44.82.31.2]

>karl k5di
>Karl F. Larsen ---- k5di@acca.nmsu.edu --- <http://acca.nmsu.edu/~k5di/>
>--->
>
>

28. Re: [NETSIG:2785] Re: An Age Old Question

From: Phillip Conza <phil@z12tze.mlb.planet.gen.nz>
Date: Sun, 8 Sep 1996 15:52:38 +12
To: netsig@tapr.org
Message-ID: <323398c7.z12tze@z12tze.mlb.planet.gen.nz>
Rendered body type: text/plain

Hi Ralph,

I agree with Ron FBB DOS v 5.15c is the way to go.. I have have 3
versions running here on 286 ,386 , 486 all with BPQ and I currently have 2
versions on 386 s and these have given me 4 + years of reliabilty with only
Operator crashes , Nothing to do with the software just pushing everything to
the MAX..

I reccommend 386DX40 with 4 meg with BPQ .. Reason is If you run Nodes and
say more than 2 ports the extra speed and memory will allow plent of leaway,
my current Main BBS has 4 radio ports x 4 channels each plus 2 Link channels
with 2 channels per link 16 channels in total , 6 ports off 1 PC..

I run many servers and many PG programs on my 386DX40 with 5 meg and I'll
stand by it until the Motherboard fails..

73 Phillip ZL2TZE

> >-- [From: Ralph T. Stetson, III
KD1R * EMC.Ver #2.5.02] - - > >
> >Also most importantly how does it stack up to other systems in ease of set
> >up....That last one is a bomb folks.....considering all the help me
> >messages I see daily on the system.....
> >
>
> Ralph you cant beat FBB (DOS). It does (just about) everything, its easy to
> setup and maintain, and best of all is reliable. I have 2 running here with
> multiple ports, BPQ, Netrom & EtherNet and it runs & runs without crashing
> or other problems.
> Compressed fwding is very reliable as well.
> I've run it on 286 with 1 meg or 2 meg as well as 386DX with 4 meg no problems.
> 73 - Ron
>
> --
Phillip Conza
AX25 ZL2TZE @ ZL2TZE.#73.NZL.OC
E-Mail phil@zl2tze.mlb.planet.gen.nz

29. Re: [NETSIG:2800] Re: 2 MTR 9600

From: Mike Curtis <wd6ehr@kaiwan.com>
Date: Mon, 9 Sep 1996 03:43:54 -0700 (PDT)
To: netsig@tapr.org
Message-ID: <Pine.SUN.3.93.960909033924.18464B-100000@kaiwan009.kaiwan.com>
Rendered body type: text/plain

On Sun, 8 Sep 1996 aa7ya@juno.com wrote:

> WOW!!! I wasn't sure that 9600 baud could be used on 2 meters! Maybe I
> missed something, somewhere, somehow....

It's in the part 97 rules. Speeds up to 19,200 baud are legal on 2 meters. Of course, bandwidth limitations make 9600 baud about tops using k9ng FSK protocol.

> The thought of 9.6K baud gives me another option for a backbone link up
> here, since most of the links are on 145.010, and getting crowded....
> Forget that 440 will make it happen, unless I have short hops to get me
> to the existing Montana Backbone Network. That involves (\$\$\$),
> something that I am short on.

For 70cm, the TEKK KS-900 and KS-960 are both great little radios. 2 watts, single channel, data only. At around \$100, crystallized, they're hard to beat. They have a 5 watt version, too - the KS-1000.

-- mike

30. Re: 2 MTR 9600

From: David Rush <rush@op.ks.erg.sri.com>
Date: Mon, 09 Sep 1996 08:33:49 -0500
To: netsig@tapr.org
Message-ID: <199609091333.IAA00452@op.ks.erg.sri.com>
Rendered body type: text/plain

>You should get the issue of QST that had and excellant article
>about 9600 baud "ready" radios!!!! They were advertised as

Yeah, read the article in QST.

>If I am right only one radio was truly 9600 capable at the time
>of the review. It was a Yaesu radio.

I think that rig was the PCS-9600, made by Azden (as I recall). Nice radio from what I've read, but not cheap - somewhere in the \$600-\$700 range last time I checked.

David, n00xh

31. X1J or BPQ updates?

From: "Rex H. Ishmael" <rishmael@texhoma.net>
Date: Mon, 9 Sep 1996 20:22:09 -0500
To: netsig@tapr.org
Message-ID: <1.5.4.16.19960909201737.32df5778@texhoma.net>
Rendered body type: text/plain

First let me say I know nothing about code smithing..but
 About a year ago,maybe less, someone here indicated that the X1j code
 was being worked on or upgraded to attempt to include auto route quality
 calculations, what news on that end? Are there updates forth coming for
 X1J code?
 In the same token the idea was bounced that BPQ node could include such
 programing as some of the calculations were already in the code (percent
 retry).. Also are there any new utilities for bpq since late 94?..
 An increased remote sysop function would be nice, say include the FT
 utility (I believe Hank put out some time back) along with maybe three
 dos functions , a copy, type and dir and or a simple edit function?
 Next on my list of questions, Is there an IP guru (BPQ version) that
 can answer question for me on getting the ip router to work properly?
 Next what happened to the BPQ documentation that someone here was going
 to write up? I think Karl was working on it and I offered to look at it but
 have seen no more mention of such works..?

```
=====
Rex Ishmael, Sr. Environmental Engineer, Halliburton Energy Services
E-Mail:rishmael@halnet.com (work)
E-Mail:rishamel@texhoma.net (home)
Amatuer Mail: WD0AJG@WD0AJG.#SCOK.OK.USA.NOAM
=====
```

32. Re: [NETSIG:2804] X1J or BPQ updates?

```
From: "Karl F. Larsen" <k5di@acca.nmsu.edu>
Date: Tue, 10 Sep 1996 06:05:38 -0600
To: netsig@tapr.org
Message-ID: <199609101205.GAA13499@acca.nmsu.edu>
Rendered body type: text/plain
```

At 08:23 PM 9/9/96 -0500, you wrote:
 >First let me say I know nothing about code smithing..but
 >About a year ago,maybe less, someone here indicated that the X1j code
 >was being worked on or upgraded to attempt to include auto route quality
 >calculations, what news on that end? Are there updates forth coming for
 >X1J code?

The X1J version 4 has dynamic ARP resolution which says when it
 hears a tcp/ip signal it reads it. If it is a new call sign it puts an ARP
 entry for that call sign in it's table as a temprary entry.

>In the same token the idea was bounced that BPQ node could include such
 >programing as some of the calculations were already in the code (percent
 >retry).. Also are there any new utilities for bpq since late 94?..

BPQ tells you EVERYTHING you ever wanted to know about the node when
 you send it r r. I am not aware of any new BPQ applications.

>An increased remote sysop function would be nice, say include the FT
 >utility (I believe Hank put out some time back) along with maybe three
 >dos functions , a copy, type and dir and or a simple edit function?
 >Next on my list of questions, Is there an IP guru (BPQ version) that
 >can answer question for me on getting the ip router to work properly?
 >Next what happened to the BPQ documentation that someone here was going
 >to write up? I think Karl was working on it and I offered to look at it but
 >have seen no more mention of such works..?
 >

I wrote a BPQ paper and sent to many hams. If I missed you I am
 sorry. As of this time I am using Linux to provide a unix platform for tnos.
 I just compiled and have running tnos 2.10.

For this reason I am less interested in BPQ.

```
>
>=====
>Rex Ishmael, Sr. Environmental Engineer, Halliburton Energy Services
>E-Mail:rishmael@halnet.com (work)
>E-Mail:rishamel@texhoma.net (home)
>Amatuer Mail: WD0AJG@WD0AJG.#SCOK.OK.USA.NOAM
>=====
>
>
```


33. Re: [NETSIG:2787] Re: TEKK Radios/KPC9612 at 19.2!

From: Al Groff <al@pal.ia.net>
Date: Tue, 10 Sep 1996 20:36:40 -0500 (CDT)
To: netsig@tapr.org
Message-ID: <Pine.LNX.3.91.960910201823.10811C-100000@pal.ia.net>
Rendered body type: text/plain

On Sat, 7 Sep 1996, Nate Bargmann wrote:

> Hi John and all.
>
> stuff deleted ...

>
> > 2. We're running 6kHz deviation, figuring that if 3kHz is right for 9600,
> > double that ought to work at 19.2. Setting the deviation with the pot in the
> > TNC is very touchy -- there's a jumper that selects hi or low level output,
> > with a pot to provide adjustment over the two ranges. As you'd expect, the
> > right value is kind of between ranges; we had to use the high output jumper
> > setting, but the pot had to be very near the bottom, and was very touchy.
>
> With the above in mind and using my trusty calculator and assuming
> the 19.2 kbps data stream is using a 9600 Hz carrier, John's mod
> index works out to exactly the same as the presently used standard
> for 9600 bps (6 kHz/9.6 kHz = .625). Since the data carrier frequency is
> fixed by the data rate the only way mod index would change is with a
> change of the system deviation. Since discriminators are a fairly
> linear circuit, it would stand to reason a constant mod index is
> required to maintain a given voltage to the receiver of the modem.
> (I guess sitting here thinking about this has revealed the key to
> this mystery!) Also, I've thought of this more and recalling
> deviation setting of analog microwave systems it clicks now that as
> max mod frequency increases, system deviation must increase to
> maintain mod index (duh!).
>
more deleted...

I guess that I am from the old school... a measurement is worth
a thousand words...

I have preforemed the following test on several radios (at 9600)...

Modulate the motorola service monitor with the output of the modem
set up for Bit error rate test... (i.e. all zeros into the scrambler)
feed the rf to radio/modem under test and listen to the errors
coming out of the descrambler (should be full quieting if no errors)

adjust the service monitor signal level, frequency and deviations
while listing to the errors... (error rate has a characteristic similar
to the familiar FM queiting curve.) with TEKK KS-900 and FLexar radios
the minimum error rate occurs at 3.5-4 khz deviation and frequency errors
up to 2-3 khz are tolerable..

Most of the radios that i have measured have acceptable characteristics
with the standard filters, However i have run into a couple of dogs
that had high error rate even with strong signals.. (they're spare
parts now..)

You mileage will very !

>
> 73, de Nate KA0RNY >>
>
> ---
>
> nbargman@fullnet.net
>
> Pattison's Law of Electronics
> If more than one pair of wires are to be
> connected, the first way blows the fuse.
>
>
>

-73- AL -----+-----
Al Groff, K0VM | bbs : k0vm@wa0rjt.ia.usa.noam |

Cedar Rapids, Ia | packet : k0vm@k0vm.ampr.org |
-----+ internet : al@ia.net -----+

34. [Fwd: Anybody running a packet server?]

From: Dave Wolf <wo5h@tapr.org>
Date: Tue, 17 Sep 1996 10:10:32 -0700
To: netsig@tapr.org
Message-ID: <323EDB85.3B30@tapr.org>
Rendered body type: text/plain

Folks:

Anyone have something for Iain?

Dave W05H

35. Re: [NETSIG:2807] [Fwd: Anybody running a packet server?]

From: moyers@vic.com
Date: Tue, 17 Sep 1996 22:06:28 EDT
Message-ID: <199609180208.WAA04402@gatekeeper.vic.com>
Rendered body type: text/plain

** Reply to note from netsig@tapr.org Tue, 17 Sep 1996 10:16:19 -0500 (CDT)
Dave, check out <http://www.wa4dsy.radio.org/>

This is the web page of the creator of the 56K GRAPES modem. Not only is it his web page, but the server is at his QTH and the path to the ISP is via a 56K packet repeater. Dale has quite a bit of info on this server about High Speed networking and equipment. He also has a web page for JAVA/APRS, this allows visitors to the web page to see APRS activity in the southeast in REAL TIME.

This may help....73 de John N4QEA

John Moyers N4QEA
PACKET - N4QEA @ N4QEA.#METN.TN.USA.NA
INET - moyers@vic.com
Cruise Missile - 36 02.86N 083 55.40W A=0001100

36. Packet Autonomy Threatened in Texas

From: Dave Wolf <wo5h@tapr.org>
Date: Wed, 18 Sep 1996 22:19:55 -0500
To: bbssig@tapr.org
Cc: netsig@tapr.org
Message-ID: <3240BBDB.32F5@tapr.org>
Rendered body type: text/plain

To all packet service providers:

This summer, the frequency coordinating body for Texas decided that packet radio needed their magic touch. Please take a look at the Texas Packet Radio Society web site for the complete story. It is just beginning. I hope this is NOT something that you will have to face in your state.

The lesson is that politics is sometimes as important as mastering new technology.

<http://www.tprs.org/html/threat.htm>

Best 73,

Dave Wolf W05H
President,
Texas Packet Radio Society

37. X1J4 question

From: robd@netshop.van.hookup.net (Rob Dover)
Date: Wed, 18 Sep 96 21:30:12
To: netsig@tapr.org
Message-ID: <199609191423.HAA04369@freya.van.hookup.net>
Rendered body type: text/plain

Greetings.

Has anyone run into this? I have 4 X1J4 MFJ1270 series node TNC's and all seem to exhibit the same problem. When the node table gets fairly high (around 100 nodes and up), the TNC will do a warm start when a nodes list is called for. The buffers value drops to 0 at this time also. I am running around 150 for CPU loops. I know this is a bit low and plans are in the works to upgrade the TNCs. Any ideas welcome.

73 -Rob-

--

```
-----
Packet:  ve7eje @ ve7rxd.#scbc.bc.can.noam |    Illiterate? Write
AMPRnet: ve7eje@hamgate.ve7tsi.ampr.org   |    for FREE HELP!
Internet: robd@netshop.net                 |
-----
```

38. Re: [NETSIG:2810] X1J4 question

From: shawnpat@sisna.com
Date: Thu, 19 Sep 1996 09:46:46 +0100
To: netsig@tapr.org
Message-ID: <199609191647.LAA23106@tapr.org>
Rendered body type: text/plain

At 09:44 AM 9/19/96 -0500, you wrote:

>Greetings.

>Has anyone run into this? I have 4 X1J4 MFJ1270 series node TNC's and all
>seem to exhibit the same problem. When the node table gets fairly high
>(around 100 nodes and up), the TNC will do a warm start when a nodes list
>is called for. The buffers value drops to 0 at this time also. I am
>running around 150 for CPU loops. I know this is a bit low and plans are
>in the works to upgrade the TNCs. Any ideas welcome.
>73 -Rob-

Upgrade the TNC's or modify them.
Modifications would include 10Mhz CPU upgrade (Paccomm Kit) and
memory upgrade if they are older models.

The CPU upgrade will increase the CPU loops and allow the TNC to
handle the larger tables.

Personal opinion, don't use MFJ1270's.

73 de Shawn, N7XBM

39. X1J4 question

From: "Rex H. Ishmael" <rishmael@texhoma.net>
Date: Thu, 19 Sep 1996 13:06:47 -0500 (CDT)
To: netsig@tapr.org
Message-ID: <1.5.4.16.19960919130205.319f119c@texhoma.net>
Rendered body type: text/plain

>To: netsig@tapr.org
>Subject: X1J4 question
>Message-ID: <199609191423.HAA04369@freya.van.hookup.net>

>Greetings.

>Has anyone run into this? I have 4 X1J4 MFJ1270 series node TNC's and all
>seem to exhibit the same problem. When the node table gets fairly high
>(around 100 nodes and up), the TNC will do a warm start when a nodes list
>is called for. The buffers value drops to 0 at this time also. I am
>running around 150 for CPU loops. I know this is a bit low and plans are
>in the works to upgrade the TNCs. Any ideas welcome.
>73 -Rob-
>--
>

WE have several X1j's most are PacComm tiny and micro 2's and most
now have 10mhz clock and no problem, although we never get node lists
over 80 as that is our limit set in parms.. on the older 1270 I made
sure we modified to the 4.77 speed and the cpu loops run about 300 to 400
depending on use..
I would certianly try to limit the node list to a minimum of useful nodes...
from there make sure the clock speed is at maximum ...

REX

=====

Rex Ishmael, Sr. Environmental Engineer, Halliburton Energy Services
E-Mail: rishmael@halnet.com (work)
E-Mail: rishamel@texhoma.net (home)
Amateur Mail: WD0AJG@WD0AJG.#SCOK.OK.USA.NOAM
=====

40. Re: [NETSIG:2810] X1J4 question

From: Mike Stickney <michael@calweb.com>
Date: Thu, 19 Sep 1996 12:19:13 -0700
To: netsig@tapr.org
Message-ID: <32419CB1.1BDF@calweb.com>

Rendered body type: text/plain

Rob Dover wrote:

>
> Greetings.
> Has anyone run into this? I have 4 X1J4 MFJ1270 series node TNC's and all
> seem to exhibit the same problem. When the node table gets fairly high
> (around 100 nodes and up), the TNC will do a warm start when a nodes list
> is called for.

Parm 1 in your list of parameter settings is listed as the maximum number of nodes expected in your nodelist table. It has been found to actually be the number of nodes AND routes in your nodelist table. Since each node can have up to three routes associated with it, you can see that setting a maximum based upon the number of nodes expected can be too small.

If you increase your maximum nodes size, log in as Sysop, enter the command "N * *" it will list all nodes and routes. You can count them and better estimate how many buffers will be required.

--

Mike Stickney Mail: <mailto:michael@calweb.com>
KM6PX Home: <http://www.calweb.com/~michael>
Packet: km6px.#nocal.ca.usa.noam
IP: 44.2.0.132

41. Re: [NETSIG:2810] X1J4 question

From: burt lang <burt@roccler.qc.ca>
Date: Thu, 19 Sep 1996 15:59:41 +0000
To: netsig@tapr.org
Message-ID: <32416DED.799F@roccler.qc.ca>
Rendered body type: text/plain

Rob Dover wrote:

>
> Greetings.
> Has anyone run into this? I have 4 X1J4 MFJ1270 series node TNC's and all
> seem to exhibit the same problem. When the node table gets fairly high
> (around 100 nodes and up), the TNC will do a warm start when a nodes list
> is called for. The buffers value drops to 0 at this time also. I am
> running around 150 for CPU loops. I know this is a bit low and plans are
> in the works to upgrade the TNCs. Any ideas welcome.
> 73 -Rob-

As someone else has pointed out, the number of entries in the node list (Parm 1) appears actually to be the total number of routes to each node listed. In order to reduce this number of routes, make sure you have the alternate broadcast algorithm enabled (Mode 8 = 2 or 3) This will eliminate most of the alternate routes that are entered for each node listing (which are mostly trivial routes through your matrix).

After that if it is still sluggish, you can spend the money and upgrade everything to Tiny-2 TNCs with 19.2 KHz serial port rates or higher and preferably get the 10 MHz units.

Good luck....Burt>>>

42. Re: [NETSIG:2810] X1J4 question

From: mcduffie@hannibal.wncc.cc.ne.us (Gary McDuffie, Sr.)
Date: Thu, 19 Sep 1996 21:33:27 GMT
To: netsig@tapr.org
Message-ID: <3245bbc4.23840855@hannibal.wncc.cc.ne.us>
Rendered body type: text/plain

On Thu, 19 Sep 1996 09:44:14 -0500 (CDT), you said:

> Greetings.
> Has anyone run into this? I have 4 X1J4 MFJ1270 series node TNC's and all
> seem to exhibit the same problem. When the node table gets fairly high
> (around 100 nodes and up)

The question begs to be asked, why would anyone want their nodes list to be that big? Can you really reliably connect to that many nodes all the time? Sure, there are those who can, but the usual case is that you can't connect to half of the ones in the list. If you can't connect to it reliably, it has no business being on the list (IMHO) :)

Gary

43. Maxor 50 radios?

From: Robert <w5robert@blkbox.COM>
Date: Thu, 19 Sep 1996 17:02:22 -0500 (CDT)
To: netsig@tapr.org
Message-ID: <9609191702.aa15807@blkbox.COM>
Rendered body type: text/plain

Hw abt those motorola radios for use in packet??
It appears they have +vdc on the mic line for a small amp
in the mic?? How does one tie into these?
--
73 Robert WB5CRG w5robert@blkbox.com

44. Re: [NETSIG:2810] X1J4 question

From: "Karl F. Larsen" <k5di@acca.nmsu.edu>
Date: Thu, 19 Sep 1996 16:35:04 -0600
To: netsig@tapr.org
Message-ID: <199609192235.QAA16421@acca.nmsu.edu>
Rendered body type: text/plain

Sounds like you must have only 8 kb of memory Rob. We are running
x1j4 here with the Pac Com Tiny-2 and with the gateway nodes it has well
over 100 and has no problems. Also the CPU is thundering along at 5 mhz too.
You may want to buy the Pac Com update kit for your mfj's. They used to be
\$25 and are a good deal!

73, karl

At 09:44 AM 9/19/96 -0500, you wrote:
>Greetings.
>Has anyone run into this? I have 4 X1J4 MFJ1270 series node TNC's and all
>seem to exhibit the same problem. When the node table gets fairly high
>(around 100 nodes and up), the TNC will do a warm start when a nodes list
>is called for. The buffers value drops to 0 at this time also. I am
>running around 150 for CPU loops. I know this is a bit low and plans are
>in the works to upgrade the TNCs. Any ideas welcome.
>73 -Rob-
>--
>-----
>Packet: ve7eje @ ve7rxn.#scbc.bc.can.noam | Illiterate? Write
>AMPRnet: ve7eje@hamgate.ve7tsi.ampr.org | for FREE HELP!
Internet: robd@netshop.net
>
>
Karl F. Larsen ---- k5di@acca.nmsu.edu --- <http://acca.nmsu.edu/~k5di/> -->

45. Re: [NETSIG:2811] Re: X1J4 question

From: "Karl F. Larsen" <k5di@acca.nmsu.edu>
Date: Thu, 19 Sep 1996 16:46:28 -0600
To: netsig@tapr.org
Message-ID: <199609192246.QAA16790@acca.nmsu.edu>
Rendered body type: text/plain

At 12:05 PM 9/19/96 -0500, you wrote:
>At 09:44 AM 9/19/96 -0500, you wrote:
>>Greetings.
>>Has anyone run into this? I have 4 X1J4 MFJ1270 series node TNC's and all
>>seem to exhibit the same problem. When the node table gets fairly high
>>(around 100 nodes and up), the TNC will do a warm start when a nodes list
>>is called for. The buffers value drops to 0 at this time also. I am
>>running around 150 for CPU loops. I know this is a bit low and plans are
>>in the works to upgrade the TNCs. Any ideas welcome.
>>73 -Rob-
>
>Upgrade the TNC's or modify them.
>Modifications would include 10Mhz CPU upgrade (Pacom Kit) and
>memory upgrade if they are older models.
>
>The CPU upgrade will increase the CPU loops and allow the TNC to
>handle the larger tables.
>
>Personal opinion, don't use MFJ1270's.

Got a problem with your personal opinion Shawn. The mfj1270 is a
perfect copy of the original tnc-2. There are more of these on mountain tops
and on desks than all others combined. You just don't hear much about them.

Until you try to run a fancy node like x1j4 and the 2.5 mhz cpu can't hack it...hi

>
>73 de Shawn, N7XBM
>
>
>
Karl F. Larsen ---- k5di@acca.nmsu.edu --- http://acca.nmsu.edu/~k5di/ -->

46. Re: [NETSIG:2816] Maxor 50 radios?

From: rmackay@cycor.ca (Ron VE1AIC)
Date: Thu, 19 Sep 1996 23:12:45 -0300
To: netsig@tapr.org
Message-ID: <199609200212.XAA09387@bud.peinet.pe.ca>
Rendered body type: text/plain

>Hw abt those motorola radios for use in packet??
>It appears they have +vdc on the mic line for a small amp
>in the mic?? How does one tie into these?
>--
>73 Robert WB5CRG w5robert@blkbox.com
>
>
Most tncs have a blocking capacitor in the tx audio line, but if in doubt you can always add a capacitor of .33 to 1.0uF in series with the tx audio to block the mic dc.
73 - Ron

47. X1J4 Setup?

From: Marvin Munster x85388 <mmunster@qualcomm.com>
Date: Fri, 20 Sep 1996 09:50:40 -0700 (PDT)
To: netsig@tapr.org
Message-ID: <199609201650.JAA20120@nala.qualcomm.com>
Rendered body type: text/plain

I am trying to change over to the X1J4 firmware, and have a few questions. I asked this some time back and recieved only one response. (Is this stuff proprietary to an area?)

I realize this all is open for everyone's interperatation and personal feeling, but here goes...

1. What is your nodes parms and why?
2. What is your nodes mode and why?
3. What is a good help message to put in the node, and why?
4. What is the BEST way to burn the e-prom?

Currently, this is a stan-a-lone node, soon to be linked. I just want it to work with the X1J4 first. Any help would be appreciated. Direct comments or SIG would be appreciated.

Thanks.

Marvin.

```
      .  _ \  _ \
     . /  (o) (o) \
    | \ | (o) (o) | / |
-----0000-----oo-----o000o-----
|  Marvin J. Munster - WB6PKK  |
|  WB6PKK@W6NWG.#SOCA.CA.US.NOAM  |
|  WB6PKK@AMSAT.org          |
|_____0000._____|
      .0000      ( )
      ( )      ) /
      \ (      ( _/
      \_)      \_)
```

48. 9600 with 19.2 BW radios ?

From: Mike Fahmie <MPFahmie@lbl.gov>
Date: Fri, 20 Sep 1996 09:52:01 -0700
To: netsig@tapr.org
Message-ID: <199609201655.JAA26951@mh1.lbl.gov>

Rendered body type: text/plain

I am considering obtaining some Tekk radios for 9600 baud, but I would like to leave an option for future 19.2kb service by ordering them with IF filters for 19.2kb [from PacComm]. I would double the conventional 3500 Hz deviation to about 7 KHz to fill the wider bandwidth. My 1st impression is that I would be operating Hi-Fi 9600, am I missing anything, are there disadvantages to this approach?

-Mike-

Mike Fahmie - Advanced Light Source
Lawrence Berkeley National Laboratory
(510) 486-4030 - MPFahmie@lbl.gov
WA6ZTY @ N6EEG

49. Re: 9600 with 19.2 BW radios ?

From: Jeff King <jeff@mich.com>
Date: Fri, 20 Sep 1996 14:26:10 -0500
To: netsig@tapr.org
Cc: MPFahmie@lbl.gov
Message-ID: <2.2.32.19960920192610.0068efa4@mail.mich.com>
Rendered body type: text/plain

Actually, I'd think they would work well. Your doubling your modulation index and issues such as frequency drift will be less of a problem. Your eye pattern should look a lot 'cleaner'. The negatives are that you'll occupy slightly less than twice the bandwidth you would at +- 3.5khz and your power density will be cut in half.

I believe this is what Kantronics (John?) is doing with there D4-10's at 19.2Kbaud (+-10khz).

-Jeff WB8WKA

At 12:02 PM 9/20/96 -0500, Mike Fahmie wrote:

>
>I am considering obtaining some Tekk radios for 9600 baud, but I would like
>to leave an option for future 19.2kb service by ordering them with IF
>filters for 19.2kb [from PacComm]. I would double the conventional 3500 Hz
>deviation to about 7 KHz to fill the wider bandwidth. My 1st impression is
>that I would be operating Hi-Fi 9600, am I missing anything, are there
>disadvantages to this approach?

>
>-Mike-

>
>
>Mike Fahmie - Advanced Light Source
>Lawrence Berkeley National Laboratory
>(510) 486-4030 - MPFahmie@lbl.gov
>WA6ZTY @ N6EEG
>
>

Regards,

-Jeff King
Aero Data Systems, Inc.
P.O. Box 9325
Livonia, MI 48151 U.S.A.
V 1-810-471-1787, F 1-810-471-0279

50. Re: [NETSIG:2820] X1J4 Setup?

From: "Steven R. Sampson" <ssampson@othello.tinker.af.mil>
Date: Fri, 20 Sep 1996 13:27:35 -0500
To: netsig@tapr.org
Message-ID: <3242E217.446B@othello.tinker.af.mil>
Rendered body type: text/plain

Marvin Munster x85388 wrote:

>
> 1. What is your nodes parms and why?

Keep the Frack large, about 8 seconds (reduce the retry clutter).
Keep the transmit delay in the 40's or even 50. There is a lot of
radios
that can't deal with 300 ms (my Icom 228 new needs more than this, It
shuts off the power to the receiver on transmit -- but I modified mine).

>
> 2. What is your nodes mode and why?

Keep it simple. Don't transmit backbone nodes (assuming at least two TNC's tied together, else it's a waste of time) on the user channel. There's a switch for this. The user should be confronted with user nodes, not backbone nodes. The normal user should not be able to see the backbone routes (he'll see one backbone--yours). This isn't for security, it's just to keep the node list down to what is really needed. When I hear people talk about 100 nodes in the list, it really means they haven't got a clue as to what the user really needs to be presented with.

The best simple way, is to set the default heard value to 80, and the default broadcast to 86. Then everything below 86 stays local. This is good for band openings and such. Set your node broadcast for 30 minutes, and shut off that stupid ID. Never use CW ID unless you're in a third-world country.

>
> 3. What is a good help message to put in the node, and why?

Put the info for the IP coordinator, or tell them to type BBS for help. The idea is that the better help will be on a JNOS or someones KANODE, and the IP info to wean those MSYS people off of BBS and onto IP (NNTP, etc).

>
> 4. What is the BEST way to burn the e-prom?

There's some good cheap parallel port programmers available. A friend (n0els@oklahoma.net) has one that I would buy if I was in the market. The simpler the better, almost anything can program the EPROMS found in Hamdom.

Just my opinion :-)

Steve, N5OWK
"Re-Electing Clinton,
means 4 more years of Leon Panetta!" - Krusty the Clown

51. Re: [NETSIG:2821] 9600 with 19.2 BW radios ?

From: "Karl F. Larsen" <k5di@acca.nmsu.edu>
Date: Fri, 20 Sep 1996 14:04:40 -0600
To: netsig@tapr.org
Message-ID: <199609202004.0AA18636@acca.nmsu.edu>
Rendered body type: text/plain

At 12:02 PM 9/20/96 -0500, you wrote:

>
> I am considering obtaining some Tekk radios for 9600 baud, but I would like
> to leave an option for future 19.2kb service by ordering them with IF
> filters for 19.2kb [from PacComm]. I would double the conventional 3500 Hz
> deviation to about 7 KHz to fill the wider bandwidth. My 1st impression is
> that I would be operating Hi-Fi 9600, am I missing anything, are there
> disadvantages to this approach?
>

The major disadvantage is that any normal deviation nodes will not be able to talk to yours. The penalty for the added bandwidth is more noise and more subject to intermode problems.

If they are not talking to any other nodes, why not just go with 19.2 from the start?

karl

>-Mike-

>
> Mike Fahmie - Advanced Light Source
> Lawrence Berkeley National Laboratory
> (510) 486-4030 - MPFahmie@lbl.gov
> WA6ZTY @ N6EEG
>
>

Karl F. Larsen ---- k5di@acca.nmsu.edu --- <http://acca.nmsu.edu/~k5di/> -->

52. Re: [NETSIG:2820] X1J4 Setup?

From: "Karl F. Larsen" <k5di@acca.nmsu.edu>
Date: Fri, 20 Sep 1996 14:12:14 -0600
To: netsig@tapr.org
Message-ID: <199609202012.0AA18862@acca.nmsu.edu>
Rendered body type: text/plain

```
At 11:57 AM 9/20/96 -0500, you wrote:
>I am trying to change over to the X1J4 firmware, and have a few questions.
>I asked this some time back and recieved only one response. (Is this stuff
>proprietary to an area?)
>
>I realize this all is open for everyone's interperatation and personal
>feeling, but here goes...
>
>1. What is your nodes parms and why?
>
```

I use the node paramaters sent as default except for 1 or 2 that are site specific like the node quality and total nodes to be broadcast.

>2. What is your nodes mode and why?

Again use the default

```
>  
>3. What is a good help message to put in the node, and why?  
>
```

Tell the reader to get on tcp/ip and tell where the node is located.

>4. What is the BEST way to burn the e-prom?

I use an e-prom programmer. The how to make an e-prom should have been with your e-prom programmer, and mine may be very different than yours.

>Currently, this is a stan-a-lone node, soon to be linked. I just want it to
>work with the X1J4 first. Any help would be appreciated. Direct comments
>or SIG would be appreciated.

I strongly suggest you set up and play with the node at home. You are almost guaranteed to change the e-prom a little after working with it.

karl k5di

```
>  
>Thanks.  
>  
>Marvin.
```

[illegible]

Karl F. Larsen ---- k5di@acca.nmsu.edu --- <http://acca.nmsu.edu/~k5di/> -->

53. Re: [NETSIG:2823] Re: X1J4 Setup?

From: "Edson W. R. Pereira" <ewp@uranus.healthnet.org>
Date: Fri, 20 Sep 1996 20:16:58 +0000
To: netsig@tapr.org
Message-ID: <Pine.3.89.9609202053.D24865-0100000@uranus>
Rendered body type: text/plain

On Fri, 20 Sep 1996, Steven R. Sampson wrote:

```
> The best simple way, is to set the default heard value to 80, and the
> default broadcast to 86. Then everything below 86 stays local.
```

> This is good for band openings and such. Set your node broadcast
> for 30 minutes, and shut off that stupid ID. Never use CW ID unless
> you're in a third-world country.
> ^^^^^^^^^^^^^^^^^^^^^^^

What do third world countries have to do with CW ID?

54. NEDA Web URL changes

From: burt lang <burt@roccler.qc.ca>
Date: Fri, 20 Sep 1996 16:17:52 +0000
To: netsig@tapr.org
Message-ID: <3242C3B0.5411@roccler.qc.ca>
Rendered body type: text/plain

Hi Folks.

This is just to advise that the NEDA Web Page is changing its URL slightly. The new URL is:

<http://www.cam.org/~ama/neda/NEDA.html>

The change is effective immediately. Please adjust your links accordingly. A "change of address" document will be left at the old URL for those that don't get the message.

The reason for the change is to make more efficient use of the "free" memory allocated by the ISP to its users for web pages.

73 Burt VE2BMQ

55. Re: [NETSIG:2823] Re: X1J4 Setup?

From: Jeff King <jeff@mich.com>
Date: Fri, 20 Sep 1996 17:13:32 -0500
To: netsig@tapr.org
Message-ID: <2.2.32.19960920221332.00687a34@mail.mich.com>
Rendered body type: text/plain

At 01:43 PM 9/20/96 -0500, Steven R. Sampson wrote:
>Marvin Munster x85388 wrote:
>>
>> 1. What is your nodes parms and why?
>
>Keep the Frack large, about 8 seconds (reduce the retry clutter).
>Keep the transmit delay in the 40's or even 50. There is a lot of
>radios
>that can't deal with 300 ms

That's a interesting statement on txd, and sadly, a true one.

On our club node detroit.ampr.org (actually a JN0S switch) we run the "beginner" 1200 baud ax.25 user port at I think around TXD of 50 (which grosses me out). A second 1200 baud port (tcp/ip + ax.25) is set at a txd of 12 (120ms). The reasoning behind this is that those that have the knowledge to run tcp/ip shouldn't have to suffer through a txd of 50 (500ms). While 1200 baud is **slow** at any rate, it minimizes the torture with a short txd. Of course, our 19.2kbaud users only have to wait through a 10ms txd.

So in other words, if you have more then 1 1200 baud port, I'd suggest only making one with a "long" (>15) txd. Those that have defective radios can then migrate to the "beginners" port with a long txd. BTW, the original TNC1's default TXD was 4 (4*40= 160ms).

-Jeff WB8WKA

56. Re: [NETSIG:2824] Re: 9600 with 19.2 BW radios ?

From: Mike Fahmie <MPFahmie@lbl.gov>
Date: Fri, 20 Sep 1996 15:52:00 -0700
To: netsig@tapr.org
Message-ID: <199609202255.PAA14029@mh1.lbl.gov>
Rendered body type: text/plain

> The major disadvantage is that any normal deviation nodes will not
>be able to talk to yours. The penalty for the added bandwidth is more noise
>and more subject to intermode problems.

>
> If they are not talking to any other nodes, why not just go with

>19.2 from the start?
>
>karl

Karl,

This will be a set of about 6 or 7 nodes arranged geographically in a rough circle. They are on mountaintops, but the quality of the paths varies, I would like them all to be able to talk to one another. They talk to no one else (except through their individual downlinks).

An existing system is working now at 9600 with poor eyepatterns (due to poor receiver group delay characteristics). I'd like to replace it with a more robust system, 19.2 would be nice, but there is some concern that the new system may not be happy at 19.2 KB due to multipath, etc. If we obtain radios with BW for 19.2kb, we can still use them at 9600 if things don't work out well.

-Mike-

Mike Fahmie - Advanced Light Source
Lawrence Berkeley National Laboratory
(510) 486-4030 - MPFahmie@lbl.gov
WA6ZTY @ N6EEG

57. Re: [NETSIG:2820] X1J4 Setup?

From: Dale Seaburg <dseaburg@web-access.net>
Date: Fri, 20 Sep 1996 20:18:08 -0500
To: netsig@tapr.org
Message-ID: <32434250.6377@web-access.net>
Rendered body type: text/plain

Marvin Munster x85388 wrote:

>
> I am trying to change over to the X1J4 firmware, and have a few questions.
> I asked this some time back and recieved only one response. (Is this stuff
> proprietary to an area?)
>
>snip....

Try looking at this web-site. I noticed they offer an ftp of suggested X1JR4 and G8BPQ node paramters. <http://www.cam.org/~ama/neda/NEDA.html>

Dale Seaburg KG5LT
dseaburg@web-access.net

58. Re: [NETSIG:2826] Re: X1J4 Setup?

From: "Karl F. Larsen" <k5di@acca.nmsu.edu>
Date: Sat, 21 Sep 1996 06:22:32 -0600
To: netsig@tapr.org
Message-ID: <199609211222.GAA10132@acca.nmsu.edu>
Rendered body type: text/plain

At 03:37 PM 9/20/96 -0500, you wrote:
>
>
>On Fri, 20 Sep 1996, Steven R. Sampson wrote:
>
>> The best simple way, is to set the default heard value to 80, and the
>> default broadcast to 86. Then everything below 86 stays local.
>> This is good for band openings and such. Set your node broadcast
>> for 30 minutes, and shut off that stupid ID. Never use CW ID unless
>> you're in a third-world country.
>> ^^^^^^^^^^^^^^^^^^^^^^^^^^^
>
>What do third world countries have to do with CW ID?
>

The major third world that must transmit a cw id is England...:)

karl

Karl F. Larsen ---- k5di@acca.nmsu.edu --- <http://acca.nmsu.edu/~k5di/> -->

59. Re: [NETSIG:2829] Re: 9600 with 19.2 BW radios ?

From: "Karl F. Larsen" <k5di@acca.nmsu.edu>
Date: Sat, 21 Sep 1996 07:04:32 -0600
To: netsig@tapr.org
Message-ID: <199609211304.HAA10682@acca.nmsu.edu>
Rendered body type: text/plain

At 06:12 PM 9/20/96 -0500, you wrote:

>
>> The major disadvantage is that any normal deviation nodes will not
>>be able to talk to yours. The penalty for the added bandwidth is more noise
>>and more subject to intermode problems.
>>
>> If they are not talking to any other nodes, why not just go with
>>19.2 from the start?
>>
>>karl
>
>
>Karl,
>
>This will be a set of about 6 or 7 nodes arranged geographically in a rough
>circle. They are on mountaintops, but the quality of the paths varies, I
>would like them all to be able to talk to one another. They talk to no one
>else (except through their individual downlinks).

Boy, hidden transmitter city! And poor paths to boot! I would sleep
poor if I had to keep a system of 7 nodes that all talk to each other working.

>
>An existing system is working now at 9600 with poor eyepatterns (due to poor
>receiver group delay characteristics), I'd like to replace it with a more
>robust system, 19.2 would be nice, but there is some concern that the new
>system may not be happy at 19.2 KB due to multipath, etc.

Over poor paths, the larger deviation will hurt the eye pattern
because the noise power will be higher. So be real careful. If the problem
is really the receiver bandpass then the new receivers *might* help.

If we obtain
>radios with BW for 19.2kb, we can still use them at 9600 if things don't
>work out well.

Again except over poor paths with weak signals.

I would like to know how well the current system is working. My
approach since I know nothing of your conditions, would be to lock out nodes
at other nodes until I got the best overall speed out of the system. Then,
as an example, if the route from node 3 to 6 is poor, lock that route out at
nodes 3 and 6.

But I bet you did not do any of that. It just works right?

73 de karl aka k5di

>
>-Mike-
>
> Mike Fahmie - Advanced Light Source
> Lawrence Berkeley National Laboratory
> (510) 486-4030 - MPFahmie@lbl.gov
> WA6ZTY @ N6EEG
>
>
Karl F. Larsen ---- k5di@acca.nmsu.edu --- <http://acca.nmsu.edu/~k5di/> -->

60. Re: [NETSIG:2820] X1J4 Setup?

From: aa7ya@juno.com
Date: Sat, 21 Sep 1996 16:33:16 EDT
To: netsig@tapr.org
Cc: mmunster@qualcomm.com
Message-ID: <19960921.143052.5351.1.aa7ya@juno.com>
Rendered body type: text/plain

On Fri, 20 Sep 1996 11:57:04 -0500 (CDT) Marvin Munster x85388
<mmunster@qualcomm.com> writes:

>I am trying to change over to the X1J4 firmware, and have a few
>questions.

>

[SNIP]

>

>1. What is your nodes parms and why?

1. Set your TXD as low as possible, but take in consideration that there are some users that are using radio's that they don't really want to use on voice... most of these are older radios, which have slower T/R switching. So a TXDelay of 40 would be the lowest you might go on a scenario I just showed above.

2. Don't let your node propagate nodes that show up only during enhanced conditions, this only screws up the network, and might even create a separate path to a direct neighbor node that you have "hard coded" into your routes list. Set the node up, as I have, with a auto minimum quality update of 100, and the default radio port quality less than the minimum quality. This will ensure that the routes that are set by the NodeOp will not be included in the routes list. Use a hard coded route for the neighbor nodes on the radio port of 192, and 248 on the RS232 (port 1) port. I see a couple of nodes in my area that have oddball numbers for the neighbor routes, even when the route was damn solid.

3. Do not use the CW ID, use the node ID and beacon UI packets only when the node is actually being used. So when no one is using the node, the only thing that the node transmits, is it's nodes list to the neighboring nodes. In other words, less clutter on the bandwidth. Why they even put a CW ID on the node?, is beyond me.

4. If you plan to use TCP/IP, get the node IP number burned into the EPROM, otherwise, you will have to manually set it when you lose all the NodeOp set parameters, also, turn the IP router on. ;-)

5. Set your maximum number of destination nodes no higher than 100, otherwise, you might end up having to run up to the node site and manually reset the node, since it will run short of memory, thus making the node shut itself down. Yes, each node entry in your node list takes up MUCHO memory, especially when your node might be near a packet/internet gateway.

6. Also, set up your node so that it will _NOT_ tell the neighbor nodes what back bone nodes it is hearing. This is referred in the manual as "Hash node broadcast enable". Turn this off.

7. Turn off the "Slime trail control". This will show callsigns, with no node alias's when you do a 'nodes' command.

8. Turn the digipeat enable off. The node is on for a purpose, routing packets, not repeating packets, thus with it on, you will have the "Hidden Transmitter Syndrome", caused by those users that don't know better.

>3. What is a good help message to put in the node, and why?

I think your referring to 'info'. Mine is...

DEER:AA7YA-4}
Located 4 miles NW of Whitetail, Montana [DN78iw]
Type 'bbs' to leave a message for AA7YA, if
your have any questions.

This is a "short and sweet" message, you know where the node is, and who to get ahold of if you have any questions.

I am sorry I can't answer your other questions, since I had my EPROM burned by another ham, but this should get you started. Good luck

>Thanks.

>
>Marvin.

73 - Stacey, aa7ya@juno.com

61. Re: X1J4 Setup?

From: aa7ya@juno.com
Date: Sat, 21 Sep 1996 17:04:36 EDT
To: netsig@tapr.org
Message-ID: <19960921.150252.5351.2.aa7ya@juno.com>
Rendered body type: text/plain

On Sat, 21 Sep 1996 07:33:18 -0500 (CDT) "Karl F. Larsen"
<k5di@acca.nmsu.edu> writes:

>At 03:37 PM 9/20/96 -0500, you wrote:
>>
>>
>>On Fri, 20 Sep 1996, Steven R. Sampson wrote:
>>
>>> The best simple way, is to set the default heard value to 80, and
>the
>>> default broadcast to 86. Then everything below 86 stays local.
>>> This is good for band openings and such. Set your node broadcast
>>> for 30 minutes, and shut off that stupid ID. Never use CW ID
>unless
>>> you're in a third-world country.
>>> ^^^^^^^^^^^^^^^^^^^^^^^^^^^
>>
>>What do third world countries have to do with CW ID?
>>
>
> The major third world that must transmit a cw id is
>England...:)

Many countries in Africa do as well, since there are few
users there anyway, according to the "Doctor Is In" article
in QST a few months ago, from a US Ham that wanted to
take his packet station with him while staying there.

>karl

Stacey, aa7ya@juno.com

62. Subscribe

From: "Neal Winters" <nealwinters@cyberia.com>
Date: Thu, 26 Sep 1996 10:28:23 -0400
To: <netsig@tapr.org>
Message-ID: <199609240241.VAA11797@tapr.org>
Rendered body type: text/plain

Subscribe

nealwinters@juno.com or nealwinters@cyberia.com

Thanks.

- Neal - N3XYW

63. TAPR SS Position Statement

From: Steve Stroh <strohs@halcyon.com>
Date: Tue, 24 Sep 1996 05:42:51 -0700 (PDT)
To: TAPR Networking SIG List <netsig@tapr.org>
Message-ID: <Pine.Ult.3.93.960924053846.11414C-100000@chinook.halcyon.com>
Rendered body type: text/plain

This will be published in the upcoming PSR. It was passed at the Board
meeting held last Friday.

Cheers - Greg Jones WD5IVD
(forwarded from TAPR-BB mailing list by Steve Stroh N8GNJ, NetSIG
moderator)

TAPR's Statement on Spread Spectrum Technology Development

TAPR was founded in 1982 as a membership supported non-profit amateur radio

research and development organization with specific interests in the areas of packet and digital communications. In the tradition of TAPR, the Board of Directors at their Fall 1995 meeting voted that the organization would begin to actively pursue the research and development of amateur radio spread spectrum digital communications. At the Spring 1996 board of directors meeting, the following statement of purpose was passed:

"TAPR believes that the technical facts support our conviction that conventional and spread spectrum systems can coexist without detriment to conventional systems on all frequencies from MF to EHF. To this end, TAPR will begin to research spread spectrum systems that will develop technology for future deployment."

As stated above, the TAPR board feels strongly about TAPR's focus on spread spectrum technology and especially how it relates to the potential coexistence on frequencies that will have increased number of users occupying them. The amateur radio bands, like other spectrum will become more heavily utilized in the future. It is in the interest of amateur radio to develop systems that are interference-resistant while not interfering with other primary or secondary users on those frequencies.

TAPR understands the concerns many have with the new technology, and believes that efforts in both education and research is necessary in order to allay the fears about interference and to demonstrate the benefits of the technology.

TAPR believes that today's communications technology is moving toward all digital transmitters and receivers. These advances in technology, combined with the swift evolution of cell based transmission and switching protocols, are opening up a new set of possibilities for unique new services utilizing intelligent networks. These will contain smart transmitters, receivers, and switches. Today's Internet is perhaps the best example of a self-regulating structure that embodies these new technological approaches to communications in the networking domain. However, to date, many of these innovations have not moved into the wireless networking arena. TAPR will work on moving these innovations into the amateur radio community.

TAPR feels that the VHF/UHF/SHF radio networks of the future will involve a mixture of links and switches of different ownership, which terminate at the end-user via relatively short-distance links. What will then be required is a built-in, distributed, self-governing set of protocols to cause the network's behavior to make more efficient use of a limited, common shared resource, the radio spectrum. Creating such a self-regulating structure for the optimal sharing of spectrum will require much effort.

One of the major problems which stands in the way of these new approaches today is the current FCC regulatory environment and the manner in which spectrum is managed and allocated under its rules.

Historically, the current regulatory approach to radio has been based upon the technology that was in use at the time that the Communications Act of 1934 was framed, basically what we would call today, 'dumb' transmitters speaking to 'dumb' receivers. The technology of that time required reserved bandwidths to be set aside for each licensed service so that spectrum would be available when needed. Given this regulatory approach, many new applications cannot be accommodated since there is no available unallocated spectrum to 'park' new services. However, given the new set of tools available to the entrepreneur with the advent of digital technology, what once were 'dumb' transmitters and receivers can now be smart devices which are capable of exercising greater judgment in the effective use and sharing of spectrum. The more flexible the tools that we incorporate in these devices, the greater the number of uses that can be accommodated in a fixed, shared spectrum.

Therefore, TAPR will focus its spread spectrum effort in the following areas:

TAPR will work to promote rules and technologies to make the most efficient use of the spectrum through power control, forward error correction, and other means to minimize interference among spread spectrum users and existing communications systems.

TAPR will work on issues and efforts with other national organizations to change the regulatory environment and rules in order to promote the experimentation, development, and later deployment of spread spectrum technology.

TAPR will work to develop information on the topic to help educate members and the amateur community as a whole about spread spectrum technology, and

to disseminate this information via printed publications, the World Wide Web, presentations at conferences and meetings, and other means.

TAPR will work to foster experimentation, development, and design of spread spectrum systems, and to facilitate the exchange of information between the researchers and other interested parties.

TAPR will work to develop a national intra-network to foster the deployment of future high-speed spread spectrum systems into regional and local communities, including the development of suitable protocols and guidelines for deployment of these systems.

TAPR will work with commercial companies who manufacture spread spectrum devices which operate in spectrum shared by the amateur radio service (ARS), in order to make them more aware of the nature of ARS operations on those bands with the goal to work towards the deployment of devices which will minimize interference between all spectrum sharing partners.

TAPR will work with commercial companies who manufacture spread spectrum devices in order to identify equipments that can be either used or modified for use for Part 97 operation.

Adopted by the TAPR Board on September 20th, 1996
at Seatac, Washington Board Meeting.

Spread Spectrum Statement Committee:
Greg Jones, WD5IVD
Dewayne Hendricks, WA8DZP
Barry McLarnon, VE3JF
Steve Bible, N7HPR

(I'll be posting my impressions on SS based on the many SS related talks I attended at the Seattle DCC last weekend. Still catching up from playing host. - Steve N8GNJ)

64. Alinco 9600 mods

From: cummings@orion.neca.com
Date: Tue, 24 Sep 1996 21:38:38 +0000
To: netsig@tapr.org
Message-ID: <199609242138.RAA29364@orion.neca.com>
Rendered body type: text/plain

Hi,

Does anyone have the 9.6K mods for the Alinco 600TB radio??

Thanks

Ian KB1SG

Ian Cummings, M.D., Ph.D.
Email: cummings@neca.com, cummings@daykimhosp.chime.org
Homepage: <http://www.neca.com/~cummings>

65. Motorola Syntek radios on 9600 bd

From: bewhite@ibm.net
Date: Thu, 26 Sep 96 22:36:38
To: netsig@tapr.org
Message-ID: <9609270540.AA0014@localhost>
Rendered body type: text/plain

Does anyone have info on The Motorola Syntek UHF radio ?

We wish to modify some of these radios for use on split frequencies in part of our network backbone.

73

Barry VK2AAB @ VK2WI
bewhite@ibm.net

66. Re: [NETSIG:2838] Motorola Syntek radios on 9600 bd

From: Dave Wolf <wo5h@tapr.org>
Date: Thu, 26 Sep 1996 10:08:17 -0700
To: netsig@tapr.org
Message-ID: <324AB881.5221@tapr.org>
Rendered body type: text/plain

Barry:

The major points that I know about it are:

1) You have to find someone to program an E-PROM for the frequencies you desire.

2) It works with many of the MICOR accessories, such as the power cable and connector, mics, speakers. I am not sure that the MICOR remote control head is compatible, but it may be. I have not mixed my MICOR stuff with the SYNTEK stuff that I have.

Hopefully, someone will jump in with more knowledge than I. In case they don't, this may help you get started or make a decision about it. Several Synteks from the same batch as the one I have sitting in the shack were used for a 9600 bps backbone between Dallas and Shreveport, LA for the PacketCluster.

73,

Dave W05H

67. Re: [NETSIG:2839] Re: Motorola Syntek radios on 9600 bd

From: Dale Seaburg <dseaburg@web-access.net>
Date: Thu, 26 Sep 1996 19:18:02 -0500
To: netsig@tapr.org
Message-ID: <324B1D3A.290D@web-access.net>
Rendered body type: text/plain

Dave Wolf wrote:

>
> Barry:
>
> The major points that I know about it are:
>
> 1) You have to find someone to program an E-PROM for the frequencies you
> desire.
>
> 2) It works with many of the MICOR accessories, such as the power cable
> and connector, mics, speakers. I am not sure that the MICOR remote
> control head is compatible, but it may be. I have not mixed my MICOR
> stuff with the SYNTEK stuff that I have.
>
> Hopefully, someone will jump in with more knowledge than I. In case they
> don't, this may help you get started or make a decision about it.
> Several Synteks from the same batch as the one I have sitting in the
> shack were used for a 9600 bps backbone between Dallas and Shreveport,
> LA for the PacketCluster.
>
> 73,
>
> Dave W05H

Does this mean that these radios are different from the SYNTOR? When I looked at SYNTORs as a possible packet radio, I was told to steer clear of them because they were synthesized, AND had a rather long transmitter settling time (300+ ms, could have been upwards of 600+ ms, can't remember) before they could be considered stable enough to pass data. Does the SYNTEK have a much faster PLL design to speed up this settling time problem? More questions than answers, Dave!

Dale. KG5LT
dseaburg@web-access.net

68. ? ftp://?/BPQETHER.ZIP ?

From: "Charles E. Gelm" <gelmc@erinet.com>
Date: Fri, 27 Sep 1996 07:22:05 -0700
To: netsig@tapr.org
Message-ID: <324BE30D.6F28@erinet.com>
Rendered body type: text/plain

Hello, Everyone:

I am looking for BPQETHER.(ZIP?). I read about it in one of the SIGs and that it was @tapr.org. I perused many ftp areas @tapr but did not find BPQETHER. Please send me the URL so that I may examine this software.

Best Regards, chuck

69. Re: [NETSIG:2821] 9600 with 19.2 BW radios ?

From: Ulf.Kumm@t-online.de (Ulf Kumm)
Date: Fri, 27 Sep 96 15:37 MET DST
To: netsig@tapr.org
Message-ID: <m0v6d6E-0008TiC@mailto00.btx.dtag.de>
Rendered body type: text/plain

At 12:02 20.09.1996 -0500, you wrote:

>
>I am considering obtaining some Tekk radios for 9600 baud, but I would like
>to leave an option for future 19.2kb service by ordering them with IF
>filters for 19.2kb [from PacComm]. I would double the conventional 3500 Hz
>deviation to about 7 KHz to fill the wider bandwidth. My 1st impression is
>that I would be operating Hi-Fi 9600, am I missing anything, are there
>disadvantages to this approach?
>

We found out, that with the KS960 TEKK Transceiver:
- the 455 IF Filter should be a B-Type (30 kHz), if possible optimised for constant group-delay
- the normal 21 MHz Filter should be changed to wider type (e.g. 21M30A)
- the demodulator ic works ok up to 38 kBaud
- there are some limits in modulating a xtal controlled xmitter. If you try to get a output signal, the bandwidth is limited because of the very high Q of the TX-xtal. Even if you succeed to generate a 20 kHz deviation, watch all the spectral lines, a 19k3 modulated signal contains! Make sure, all the essential lines are within the bandwidth of the modulator.

If there is a increase of retry-rate from maybe 1 to 10% when using 19k2, the overall performance of 9k6 might be better.

Note: The TX-Delay is a constant time, independant of Baudrate. Because of TX-Delay, doubling baudrate never results in doubling total transfer speed.

To get same error rate, the energy per bit should be equal with respect to 9600. Same BER needs ideal modulation + demod and double power (SNR)

BUT: we tried many (modified) transceivers at 19k2 and KS960 is one with best results. Most mobile fm-radios are much worse and not useable with 19k2.

73! Ulf, DK9SJ

Ulf Kumm, DK9SJ, D-70597 Stuttgart, Johannes-Kraemer-Str. 34
eMail: Ulf.Kumm@t-online.de Tel: +49 711 7678-925 Fax: -924

70. Re: [NETSIG:2840] Re: Motorola Syntek radios on 9600 bd

From: Dave Wolf <wo5h@tapr.org>
Date: Fri, 27 Sep 1996 08:54:38 -0700
To: netsig@tapr.org
Message-ID: <324BF8BE.2797@tapr.org>
Rendered body type: text/plain

Dale & Barry and the group:

Please accept my apologies. My eyes saw Syntek but my brain saw Syntor. I don't know anything about the Syntek at all.

Thanks, Dale, for jogging me back into reality.

73,

Dave W05H

71. Re: [NETSIG:2841] ? ftp://?/BPQETHER.ZIP ?

From: Hank Oredson <Hank_Oredson@MENTORG.COM>
Date: Fri, 27 Sep 1996 10:40:13 -0800
To: netsig@tapr.org
Message-ID: <1.5.4.32.19960927184013.006dcc98@em-wv03.wv.mentorg.com>
Rendered body type: text/plain

At 06:38 AM 9/27/96 -0500, you wrote:

>Hello, Everyone:

>

> I am looking for BPQETHER.(ZIP?). I read about it in one of the
>SIGs and that it was @tapr.org. I perused many ftp areas @tapr
>but did not find BPQETHER. Please send me the URL so that I may

>examine this software.
>

It should be in the "w0rli" ftp area at tapr.
If it is not there, let me know and will upload it again.
Let me know at: w0rli@w0rli.or.usa.noam

Hank Oredson @ Mentor Graphics Library Operations
Internet : hank_oredson@mentorg.com "Parts 'R Us!"
Amateur Radio: W0RLI@W0RLI.OR.USA.NOAM

72. Correction to VE3JF/VE7BPE 56K BW chart...

From: wb9mjn@wb9mjn.ampr.org
Date: Fri, 27 Sep 96 13:37:03 UTC
To: netsig@tapr.org
Message-ID: <11079@wb9mjn.ampr.org>
Rendered body type: text/plain

Hi,

I m looking thru the VE3JF/VE7BPE 56K notes, given out at the TAPR/ARRL DCC 56K Workshop.

The BW chart is not quite right. In places it uses Channel BW, and other places it uses Modulation BW.

Here is my correction to the chart. It uses minimum practical channel BW. That is, if u had neighboring station, using the same example equipment, and had to coexist with it.

Speed (bps)	Bandwidth (KHz)	Efficiency (bps/Hz)
1200	15	.08
9600	25	.38
19200	100	.19
56000	100	.56

The 9600 Channel BW could be smaller with special filtering. But this is not practical, generally implemented on Ham Radio.

The Kantronics 19200 D4-10 radio uses a 60 Khz wide IF filter, requiring the 100 Khz channel, consequently.

The VE3JF/VE7BPE chart indicated 70 Khz for the 56 KB, and 20 for 1200 Baud. Clearly, this is not comparative. 20 Khz for 1200 Baud is a channel bandwidth, plus some. Whereas 70 Khz, is the WA4DSY 56K Data Radio IF BW. 100 Khz, with mods to the DSY IF filter, is a practical channelisation for the DSY modulation.

73, Don.

Mailbox : WB9MJN @ N9HSI.IL.USA.NA
AMPRNet : wb9mjn@wb9mjn.ampr.org[44.72.98.19]
Internet: wb9mjn@wb9mjn.ampr.org@uugate.aim.utah.edu

73. FW: [NETSIG:2845] Comments on: Correction to VE3JF/VE7BPE 56K BW chart...

From: Gwyn Reedy <gwyn@paccomm.com>
Date: Fri, 27 Sep 1996 17:10:57 -0400
To: "'netsig@tapr.org'" <netsig@tapr.org>
Message-ID: <01BBAC96.DA167F80@gwyn.paccomm.com>
Rendered body type: text/plain

The following message was just copied from NETSIG. My comments appear following the copied message.

From: wb9mjn@wb9mjn.ampr.org[SMTP:wb9mjn@wb9mjn.ampr.org]
Sent: Friday, September 27, 1996 10:54 AM
To: netsig@tapr.org
Subject: [NETSIG:2845] Correction to VE3JF/VE7BPE 56K BW chart...

Hi,

I m looking thru the VE3JF/VE7BPE 56K notes, given out at the TAPR/ARRL DCC 56K Workshop.

The BW chart is not quite right. In places it uses Channel BW, and other places it uses Modulation BW.

Here is my correction to the chart. It uses minimum practical channel BW. That is, if u had neighboring station, using the same example equipment, and had to coexist with it.

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73, Don.

Mailbox : WB9MJN @ N9HSI.IL.USA.NA
AMPRNet : wb9mjn@wb9mjn.ampr.org[44.72.98.19]
Internet: wb9mjn%wb9mjn.ampr.org@uugate.aim.utah.edu

I want to add to this message, not especially to dispute it.

The 9600 G3RUH/GMSK modulation can fit into a 20 KHz channel based on US FCC channel measurement methods. Using the RUH modulation for a data rate of 19.2 kb takes double the bandwidth, or about 40 KHz. The popular method of doing direct FSK of the Kantronics D4-10 takes a considerably wider bandwidth and is a rather crude scheme. I admit it works, but it is not frequency efficient as the RUH is. There is off-the-shelf equipment to do RUH 19,200. There are also 'better' 9k6 filters available for some radios.

I wonder what the meaning of the statement, "with mods to the DSY IF filter" is. The DSY modem is filtered correctly for 56kb operation and there are no narrowband components required in the transverter with which it is used. There is no need to change anything.

One can also look at doing 56kb with the RUH modulation. This is about 20% wider than the 56kb DSY modem signal, with a signal bandwidth of about 90 KHz. Could probably squeeze into a 100 KHz allocation. There is a TNC available to do this, but radio filters of the correct bandwidth are a problem.

74. Re: [NETSIG:2844] Re: ? ftp://?/BPQETHER.ZIP ?

From: "Charles E. Gelm" <gelmc@erinet.com>
Date: Thu, 26 Sep 1996 19:42:14 -0700
To: netsig@tapr.org
Message-ID: <324B3F06.79CE@erinet.com>
Rendered body type: text/plain

Hank Oredson wrote:

>
> At 06:38 AM 9/27/96 -0500, you wrote:
> >Hello, Everyone:
> >
> > I am looking for BPQETHER.(ZIP?). I read about it in one of the
> >SIGs and that it was @tapr.org. I perused many ftp areas @tapr
> >but did not find BPQETHER. Please send me the URL so that I may
> >examine this software.
> >
> >
> It should be in the "w0rli" ftp area at tapr.
> If it is not there, let me know and will upload it again.
> Let me know at: w0rli@w0rli.or.usa.noam

>
> Hank Oredson @ Mentor Graphics Library Operations
> Internet : hank_oredson@mentorg.com "Parts 'R Us!"
> Amateur Radio: W0RLI@W0RLI.OR.USA.NOAM

Hi, Hank:

Thanks. I finally found the area. I was looking under
../tapr/SIG/bbssig. Anyhow, here is is:

ftp://ftp.tapr.org/tapr/software_lib/bbs/w0rli/BPQETHER.EXE

Best Regards, Chuck

75. Re: [NETSIG:2846] FW: Comments on: Correction to VE3JF/VE7BPE 56K BW chart...

From: wb9mjn@wb9mjn.ampr.org
Date: Fri, 27 Sep 96 21:22:44 UTC
To: netsig@tapr.org
Message-ID: <11087@wb9mjn.ampr.org>
Rendered body type: text/plain

Hi Gwyn,

For everybody else's edification, the equipment specified for the chart values, for 19.2 KB was a D4-10, with a Pi card. No modem, other than the D4-10. This results in the change over the the chart in the notes.

73, Don.

Mailbox : WB9MJN @ N9HSI.IL.USA.NA
AMPRNet : wb9mjn@wb9mjn.ampr.org[44.72.98.19]
Internet: wb9mjn%wb9mjn.ampr.org@uugate.aim.utah.edu

76. Re: [NETSIG:2847] Re: ? ftp://?/BPQETHER.ZIP ?

From: wb9mjn@wb9mjn.ampr.org
Date: Fri, 27 Sep 96 21:27:21 UTC
To: netsig@tapr.org
Message-ID: <11090@wb9mjn.ampr.org>
Rendered body type: text/plain

Hi again, Gwyn,

The 25 Khz channelisation i put in my version of the chart is based on the BW neccessary for the IF filter, and its impact on channel spacing with like stations. A 20 Khz Channel may fit the BW of the emission, but a inexpensive IF filter to pass the modulation, with good Eb/N0, and margin for drift will not allow for good channel isolation at 20 Khz channel spacing.

So, ur right Gwyn, if ur on a channel without nearby neighbors.

I ve seen comments about narrowing up the deviation to make things fit in stock 12.5 Khz channelisation radios (9 Khz IF BW). But, as was shown in the original K9NG article, BER for S/N goes to pot really fast narrower than 3 KHz deviation. So, this is a practical technigue in places with mountains, and large plains within range of the mountains. Not in places with UHF Fresnel zones are a reality.

20 Khz Channelisation radios typically have 12.5 Khz BW Chebyshev IF filters. These will degrade performance. Special filtering would be required for this channelisation. In my original post, I put in this proviso.

Do u have degradation versus spacing data for, ala the K9NG article for the G3RUH GFSK?

73, Don.

Mailbox : WB9MJN @ N9HSI.IL.USA.NA
AMPRNet : wb9mjn@wb9mjn.ampr.org[44.72.98.19]
Internet: wb9mjn%wb9mjn.ampr.org@uugate.aim.utah.edu

77. Re: [NETSIG:2844] Re: ? ftp://?/BPQETHER.ZIP ?

From: HL2ACS Jeong-Cheol Yun <jcyun@chip.kohap.co.kr>
Date: Mon, 30 Sep 1996 10:31:28 +0900
To: netsig@tapr.org
Message-ID: <324F22F0.471A@chip.kohap.co.kr>
Rendered body type: text/plain

Hank Oredson wrote:

```
>
> At 06:38 AM 9/27/96 -0500, you wrote:
> >Hello, Everyone:
> >
> > I am looking for BPQETHER.(ZIP?). I read about it in one of the
> >SIGs and that it was @tapr.org. I perused many ftp areas @tapr
> >but did not find BPQETHER. Please send me the URL so that I may
> >examine this software.
> >
> >
> > It should be in the "w0rli" ftp area at tapr.
> > If it is not there, let me know and will upload it again.
> > Let me know at: w0rli@w0rli.or.usa.noam
> >
> Hank Oredson @ Mentor Graphics      Library Operations
> Internet      : hank_oredson@mentorg.com    "Parts 'R Us!"
> Amateur Radio: W0RLI@W0RLI.OR.USA.NOAM
```

Any gentleman tell me about what relation between BPQ and ETHER.
What is it ? I know that BPQ is one of the packet switch software
running under KISS mode TNC with PC and ETHER means Ethernet
or media for propagator for electron. I'll appreciate any reply for
this.

Thanks.

73

de hl2acs

October 1996

Original source file: netsig.9610

Source: http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.9610

1. Interconnecting via microwave

From: Bob Nielsen <nielsen@primenet.com>
Date: Tue, 1 Oct 1996 17:11:18 -0700 (MST)
To: netsig@tapr.org
Message-ID: <Pine.LNX.3.94.961001164956.7644B-100000@nielsen.tus.primenet.com>
Rendered body type: text/plain

We have an opportunity to link several nodes in Arizona via some full duplex channels on a microwave system. The channels are 'telephone bandwidth'. I was thinking that a way to accomplish this would be to use four-wire modems at each end. Can these be connected to a node stack via the RS-232 ports?

Would there be any modifications to the modems required to support the netrom-type stack?

Does anyone know of a source for used 4-wire modems? I suppose the faster the better, but the cheaper the better is more realistic, since I would expect that 4-wire modems are a bit pricier than standard 2-wire modems, although 9600 and 14400 modems might be available used for a reasonable price, since everybody seems to be upgrading.

Is it possible to modify 2-wire modems to 4-wire operation?

Does anyone have a better idea? I'd like to be able to go wide-band and see a faster rate, but this is to be piggybacked on a voice repeater linking system using surplus Granger/Telectra (sp?) equipment. Possibly multiple channels could be used to increase the throughput, although I haven't checked that out and am not familiar with the hardware required to do that.

I assume that something like this was used to establish wormholes before Internet gateways existed, but don't have any details.

Bob

Bob Nielsen Internet: nielsen@primenet.com
Tucson, AZ AMPRnet: w6swe@w6swe.ampr.org
 AX.25: w6swe@wb7tls.az.usa.noam
 <http://www.primenet.com/~nielsen>

2. Re: [NETSIG:2851] Interconnecting via microwave

From: Greg Jones <wd5ivd@tapr.org>
Date: Tue, 1 Oct 1996 21:16:57 -0500 (CDT)
To: netsig@tapr.org
Message-ID: <199610020216.VAA26002@tapr.org>
Rendered body type: text/plain

Hi Bob -- Texas Packet Radio Society has a 4-wire modem that Tom McDermott designed for our use on the 4-wire sites we use ON texNet in a couple of places. Really does a good job -- and the special thing is that it has modes that allow a user on one end to test and even set the levels on the far end -- this we found to be very critical on the lines we use since the setting of levels required a tech on both ends of the provider and was very difficult to arrange most of the time.

You should contact Harry Ridenour, N0CCW in San Antonio. but I don't have his e-mail handy. Try Jim Neely, wa5lhs@tapr.org first and then follow the trail. Board were pretty cheap and the only expensive part was a rockwell modem chip we used. Not sure how many TPRS has around, but if you need several I bet Dave Wolf and the TPRS group might be interested in doing some type of group purchas to get a few more boards done.

We might even have some GDC modems if you want them -- but then again we designed this modem to replace those, since they failed a lot.

Tom use to read this group from time to time, so maybe he will comment.

greg

>

```

> We have an opportunity to link several nodes in Arizona via some full
> duplex channels on a microwave system. The channels are 'telephone
> bandwidth'. I was thinking that a way to accomplish this would be to use
> four-wire modems at each end. Can these be connected to a node stack via
> the RS-232 ports?
>
> Would there be any modifications to the modems required to support the
> netrom-type stack?
>
> Does anyone know of a source for used 4-wire modems? I suppose the faster
> the better, but the cheaper the better is more realistic, since I would
> expect that 4-wire modems are a bit pricier than standard 2-wire modems,
> although 9600 and 14400 modems might be available used for a reasonable
> price, since everybody seems to be upgrading.
>
> Is it possible to modify 2-wire modems to 4-wire operation?
>
> Does anyone have a better idea? I'd like to be able to go wide-band and
> see a faster rate, but this is to be piggybacked on a voice repeater
> linking system using surplus Granger/Telectra (sp?) equipment. Possibly
> multiple channels could be used to increase the throughput, although I
> haven't checked that out and am not familiar with the hardware required to
> do that.
>
> I assume that something like this was used to establish wormholes before
> Internet gateways existed, but don't have any details.
>
> Bob
>
> ----
> Bob Nielsen Internet: nielsen@primenet.com
> Tucson, AZ AMPRnet: w6swe@w6swe.ampr.org
> AX.25: w6swe@wb7tls.az.usa.noam
> http://www.primenet.com/~nielsen
>
>

```

3. Re: [NETSIG:2851] Interconnecting via microwave

```

From: Jeff King <jeff@mich.com>
Date: Tue, 01 Oct 1996 23:40:24 -0400
To: netsig@tapr.org
Message-ID: <1.5.4.32.19961002034024.00731448@mich.com>
Rendered body type: text/plain

```

At 07:51 PM 10/1/96 -0500, Bob Nielsen wrote:

```

>We have an opportunity to link several nodes in Arizona via some full
>duplex channels on a microwave system. The channels are 'telephone
>bandwidth'. I was thinking that a way to accomplish this would be to use
>four-wire modems at each end. Can these be connected to a node stack via
>the RS-232 ports?

```

If the channels go to "DC" and have sufficient high frequency you may not even need a modem. Just make sure you don't splatter (interfer) with the main link. Even if they don't go to DC it still might work.

```

>Does anyone know of a source for used 4-wire modems? I suppose the faster
>the better, but the cheaper the better is more realistic, since I would
>expect that 4-wire modems are a bit pricier than standard 2-wire modems,
>although 9600 and 14400 modems might be available used for a reasonable
>price, since everybody seems to be upgrading.

```

I've seen V.29 modems (9600 bps 16QAM) at swaps fairly frequently. Prices from \$5 to \$50. That is a 4 wire 9600 bps modem.

```

>
>Is it possible to modify 2-wire modems to 4-wire operation?

```

I believe there are a number of "single chip" 2 to 4 wire hybrids that will do your audio. They should do what you want. Two 28.8 (33.3) modems running compression should give you a nice dedicated connection. You can even do something like this with two vhf/uhf radios. You'd use the modem "off-hook" to key the radio and a squelch sense line to generate a "ring" signal. Then you could use KA9Q NOS with PPP to link two NOS systems like this. That way, if you lost the link, NOS would think the "phone line" (radio link) disconnected and would try to "reconnect" the link. Since all (most) audio modems need a training sequence, it would re-train the link if band conditions degraded.

Regards,

Jeff King
jeff@mich.com
Linked to the internet via spread spectrum

4. Re: [NETSIG:2852] Re: Interconnecting via microwave

From: Bob Nielsen <nielsen@primenet.com>
Date: Wed, 2 Oct 1996 10:31:19 -0700 (MST)
To: netsig@tapr.org
Cc: wa5lhs@tapr.org
Message-ID: <Pine.LNX.3.94.961002102818.9754D-100000@nielsen.tus.primenet.com>
Rendered body type: text/plain

Thanks for the info Greg. I have cc'd Jim on this reply and maybe he can provide some info. One problem is that I would like to be able to connect the modems to a netrom-type node stack, which might be doable, but I don't know how. We have limited antenna space on some of the sites, and microwave will give us several channels.

Bob

On Tue, 1 Oct 1996, Greg Jones wrote:

> Hi Bob -- Texas Packet Radio Society has a 4-wire modem that Tom McDermott
> designed for our use on the 4-wire sites we use ON texNet in a couple of
> places. Really does a good job -- and the special thing is that it has
> modes that allow a user on one end to test and and even set the levels on
> the far end -- this we found to be very critical on the lines we use since
> the setting of levels required a tech on both ends of the provider and was
> very difficult to arrange most of the time.
>
> You should contact Harry Ridenour, N0CCW in San Antonio. but I don't have
> his e-mail handy. Try Jim Neely, wa5lhs@tapr.org first and then follow the
> trail. Board were pretty cheap and the only expensive part was a rockwell
> modem chip we used. Not sure how many TPRS has around, but if you need
> several I bet Dave Wolf and the TPRS group might be interested in doing some
> type of group purchas to get a few more boards done.
>
> We might even have some GDC modems if you want them -- but then again we
> designed this modem to replace those, since they failed a lot.
>
> Tom use to read this group from time to time, so maybe he will comment.
>
> greg
>
>
>
> > We have an opportunity to link several nodes in Arizona via some full
> > duplex channels on a microwave system. The channels are 'telephone
> > bandwidth'. I was thinking that a way to accomplish this would be to use
> > four-wire modems at each end. Can these be connected to a node stack via
> > the RS-232 ports?
> >
> > Would there be any modifications to the modems required to support the
> > netrom-type stack?
> >
> > Does anyone know of a source for used 4-wire modems? I suppose the faster
> > the better, but the cheaper the better is more realistic, since I would
> > expect that 4-wire modems are a bit pricier than standard 2-wire modems,
> > although 9600 and 14400 modems might be available used for a reasonable
> > price, since everybody seems to be upgrading.
> >
> > Is it possible to modify 2-wire modems to 4-wire operation?
> >
> > Does anyone have a better idea? I'd like to be able to go wide-band and
> > see a faster rate, but this is to be piggybacked on a voice repeater
> > linking system using surplus Granger/Telectra (sp?) equipment. Possibly
> > multiple channels could be used to increase the throughput, although I
> > haven't checked that out and am not familiar with the hardware required to
> > do that.
> >
> > I assume that something like this was used to establish wormholes before
> > Internet gateways existed, but don't have any details.
> >
> > Bob

Bob Nielsen Internet: nielsen@primenet.com
Tucson, AZ AMPRnet: w6swe@w6swe.ampr.org
AX.25: w6swe@wb7t1s.az.usa.noam
http://www.primenet.com/~nielsen

Message-ID: <199610031501.KAA15057@tapr.org>

Rendered body type: text/plain

TAPR Office to reduce to minimum operations

Oct 3, 1996

The TAPR Office will shutdown to minimum operations starting October 8th and running at least until October 28th.

This means that Dorothy will not be working the office phones during this period. The office will continue to operate, but at a much reduced level. E-mail, US mail, Voice Mail, etc will still be received and recorded, but everything will be processed at a very much slower rate during this period.

GPS-20 units have begun to ship. As of this e-mail, approximately 40 units have shipped. We are awaiting additional pins for the connector (suppose to arrive Oct 11th) in order to complete the remainder of the units. These pins replace the ones that were incorrect in the shipment we received. Once the pins arrive, we will get the other units out as soon as possible.

The Motorola EVM56002 have been placed on order and are expected to arrive sometime after Oct 21st. They will then be shipped out as time permits under the operational schedule at the office. There are something like 60 of the 200 units still available in this purchase at the \$85 + \$10 s/h price. Check the TAPR Web page for full details www.tapr.org. First come basis on these units.

TAPR is sorry for any delays that the reduced operations schedule at the office might cause. If everything turns out positive, the office should be back operational towards the end of October.

Cheers - Greg Jones, WD5IVD
President, TAPR

(wd5ivd@tapr.org)

8. Re: [NETSIG:2857] TAPR Office to reduce to minimum operations

From: mharnois@sbt.net (Michael Harnois)

Date: Thu, 03 Oct 1996 17:23:13 GMT

To: netsig@tapr.org

Message-ID: <3254f634.58675055@mailhost.sbt.net>

Rendered body type: text/plain

On Thu, 3 Oct 1996 10:33:32 -0500 (CDT), Greg Jones <wd5ivd@tapr.org> wrote:

>TAPR Office to reduce to minimum operations

Oct 3, 1996

It seems rather odd to make an announcement like this and not say why, especially in a membership organization. Are only the inner circle allowed to know?

--

Michael Harnois (mharnois@sbt.net)

No Organization Whatsoever

9. FW: [NETSIG:2858] Re: TAPR Office to reduce to minimum operations

From: Gwyn Reedy <gwyn@paccomm.com>

Date: Thu, 3 Oct 1996 14:43:22 -0400

To: "'netsig@tapr.org'" <netsig@tapr.org>

Message-ID: <01BBB139.3AC8A1E0@gwyn.paccomm.com>

Rendered body type: text/plain

It is a personal family matter, thus the 'talk around.' I only know because I was chatting with Greg yesterday and it came up.

From: Michael Harnois[SMTP:mharnois@sbt.net]

Sent: Thursday, October 03, 1996 8:40 AM

To: netsig@tapr.org

Subject: [NETSIG:2858] Re: TAPR Office to reduce to minimum operations

On Thu, 3 Oct 1996 10:33:32 -0500 (CDT), Greg Jones <wd5ivd@tapr.org> wrote:

>TAPR Office to reduce to minimum operations

Oct 3, 1996

It seems rather odd to make an announcement like this and not say why, especially in a membership organization. Are only the inner circle allowed to

know?

--
Michael Harnois (mharnois@sbt.net)
No Organization Whatsoever

10. Re: [NETSIG:2859] FW: Re: TAPR Office to reduce to minimum operations

From: Mike Curtis <wd6ehr@kaiwan.com>
Date: Thu, 3 Oct 1996 14:32:45 -0700 (PDT)
To: netsig@tapr.org
Message-ID: <Pine.SUN.3.93.961003142812.11949L-100000@kaiwan009.kaiwan.com>
Rendered body type: text/plain

On Thu, 3 Oct 1996, Gwyn Reedy wrote:

> It is a personal family matter, thus the 'talk around.' I only know
> because I was chatting with Greg yesterday and it came up.

> On Thu, 3 Oct 1996 10:33:32 -0500 (CDT), Greg Jones <wd5ivd@tapr.org> wrote:
>
> >TAPR Office to reduce to minimum operations Oct 3, 1996

> It seems rather odd to make an announcement like this and not say why,
> especially in a membership organization. Are only the inner circle
> allowed to know?

Also, all we NEED to know is that they will be closed. But I suppose
we're all to some extent a little on the "nosey" side ;-)

-- mike

11. Re: [NETSIG:2859] FW: Re: TAPR Office to reduce to minimum operations

From: mharnois@sbt.net (Michael Harnois)
Date: Thu, 03 Oct 1996 21:41:22 GMT
To: netsig@tapr.org
Message-ID: <325532b1.74162750@mailhost.sbt.net>
Rendered body type: text/plain

On Thu, 3 Oct 1996 13:57:03 -0500 (CDT), Gwyn Reedy <gwyn@paccomm.com> wrote:

>It is a personal family matter, thus the 'talk around.' I only know because I was chatting with Greg
yesterday and it came up.

Well, that would have been enough to say. I'm glad we're treating our staff
kindly. I just like to know what's going on -- it's my organization too, after
all.

--
Michael Harnois (mharnois@sbt.net)
No Organization Whatsoever

12. TAPR office closing comments

From: Dave Wolf <wo5h@tapr.org>
Date: Thu, 03 Oct 1996 18:09:43 -0500
To: netsig@tapr.org
Message-ID: <325447B7.69F4@tapr.org>
Rendered body type: text/plain

ALL:

Please respect the personal boundaries of Greg and his family and post
nothing further on the subject of the office closing.

I am very close to Greg's family and am incensed that anyone would think
of questioning "why?", then do it again. Consider the tremendous service
that you get from our organization office and the incredible number of
hours that Greg (and others) put in to making TAPR so super.

If you have a problem with this, take it up with me personally at the
next event we're both in attendance at. I'm pretty hard to miss.

Dave Wolf W05H

13. Re: [NETSIG:2859] FW: Re: TAPR Office to reduce to minimum operations

From: mharnois@sbt.net (Michael Harnois)
Date: Thu, 03 Oct 1996 23:19:14 GMT

To: netsig@tapr.org
Message-ID: <325949c8.80075063@mailhost.sbt.net>
Rendered body type: text/plain

One self-righteous oaf has taken it upon himself to chide me via e-mail for my postings re the office closing. I deal with other people's family traumas for a living, and I certainly understand -- more than most people, in fact -- how difficult it is to speak about what is happening at such a time. My sympathies and prayers go out to whoever it is that is involved in such a time of trial.

--

The Rev. Michael Harnois, AA0BT (mharnois@sbt.net)
Redeemer Lutheran Church, Washburn, Iowa

14. Re: [NETSIG:2861] Re: FW: Re: TAPR Office to reduce to minimum operations

From: Greg Jones <wd5ivd@tapr.org>
Date: Thu, 3 Oct 1996 19:26:08 -0500 (CDT)
To: netsig@tapr.org
Message-ID: <199610040026.TAA06732@tapr.org>
Rendered body type: text/plain

Hi Michael.

Thanks to Gwyn and Mike for their comments. Basically Dorothy doesn't want the issue broadcast, so we kept the message really low key. I have dropped my studies at UT for this month (big thanks to my profs in Austin) to be home with my folks while things develop in the next two to three weeks.

I'll be at the office (i.e. home) while Dorothy is in Dallas with my dad. So -- I'll be trying to cope with a system I setup but never run :-). Plus try to work on my dissertation while my mind is diffently elsewhere.

That is about all I want to say.

See ya - greg, WD5IVD

>

> On Thu, 3 Oct 1996 13:57:03 -0500 (CDT), Gwyn Reedy <gwyn@paccomm.com> wrote:

>

> >It is a personal family matter, thus the 'talk around.' I only know because I was chatting with Greg yesterday and it came up.

>

> Well, that would have been enough to say. I'm glad we're treating our staff kindly. I just like to know what's going on -- it's my organization too, after > all.

>

> --

> Michael Harnois (mharnois@sbt.net)

> No Organization Whatsoever

>

>

15. Re: [NETSIG:2864] Re: FW: Re: TAPR Office to reduce to minimum operations

From: mharnois@sbt.net (Michael Harnois)
Date: Fri, 04 Oct 1996 02:32:14 GMT
To: netsig@tapr.org
Message-ID: <32617650.91476541@mailhost.sbt.net>
Rendered body type: text/plain

On Thu, 3 Oct 1996 19:44:44 -0500 (CDT), Greg Jones <wd5ivd@tapr.org> wrote:

>Thanks to Gwyn and Mike for their comments. Basically Dorothy doesn't want >the issue broadcast, so we kept the message really low key. I have dropped >my studies at UT for this month (big thanks to my profs in Austin) to be >home with my folks while things develop in the next two to three weeks.

>

>I'll be at the office (i.e. home) while Dorothy is in Dallas with my dad. >So -- I'll be trying to cope with a system I setup but never run :-). Plus >try to work on my dissertation while my mind is diffently elsewhere.

>

>That is about all I want to say.

Greg--

I am really sorry you're going through this. I wasn't asking to know even this much. Just a simple "For personal reasons" at the beginning of the announcement would have been *all* I was asking for. It wasn't clear if the office was going to be closed because we were out of money, or because the organization was on the rocks, or what! Where the idea came from that I was looking for any kind of

detailed information at all is beyond me.

All my best in your difficult time.

--

Michael Harnois (mharnois@sbt.net)
No Organization Whatsoever

16. Re: [NETSIG:2860] Re: FW: Re: TAPR Office to reduce to minimum operations

From: jerry williamson <jwilliam@st1.nothingbutnet.net>
Date: Sun, 29 Sep 1996 17:03:31 -0700
To: netsig@tapr.org
Message-ID: <324F0E53.2348@st1.nothingbutnet.net>
Rendered body type: text/plain

Mike Curtis wrote:

>
>
>
> Also, all we NEED to know is that they will be closed. But I suppose
> we're all to some extent a little on the "nosey" side ;-)
>
> -- mike

Hello Mike,

Long time no heard from. Well we moved to Missouri more then a year ago. We finally got a internet site up and running here in the boonies of missouri. We are working in conjunction with a site in California and have a mci line into missouri. There sure is not a lot of tekkies out here. :)

Just wanted to drop you a line and say hello. Are you still playing and singing? Sure would not mind a tape if you have one, even if it has to be paid for ;-). Well let me know how things are going your way. Keep in touch.

--

73 de Jerry
ax.25: kc6lha@wb0qgr.mo.usa.noam
internet: jwilliam@st1.nothingbutnet.net

17. Re: [NETSIG:2866] Re: TAPR Office to reduce to minimum operations

From: "Karl F. Larsen" <k5di@acca.nmsu.edu>
Date: Fri, 4 Oct 1996 06:37:48 -0600
To: netsig@tapr.org
Message-ID: <199610041237.GAA17588@acca.nmsu.edu>
Rendered body type: text/plain

I think this is an example of why business people use what seem as very terse statements about business changes. A typical message about what is happening at the tapr office would read:

"The TAPR Office will be closed for all but emergency services from October 1 through November 1 1996. Signed, The Management."

Karl F. Larsen ---- k5di@acca.nmsu.edu --- <http://acca.nmsu.edu/~k5di/> -->

18. Re: [NETSIG:2796] Re: Deviation and Quality Control (lack of)

From: "Victor A. Kean, Jr." <70004.1645@CompuServe.COM>
Date: 07 Oct 96 00:15:11 EDT
To: "INTERNET:netsig@tapr.org" <netsig@tapr.org>
Message-ID: <961007041511_70004.1645_FHT42-2@CompuServe.COM>
Rendered body type: text/plain

Message text written by INTERNET:netsig@tapr.org

>I use 4800 Hz as an easy reference point for the "worst case" spectrum as that represents a string of alternating 1s and 0s. In fact, you can get the DCD light on a TAPR/RUH/whatever modem to come on with a carrier modulated by a sine wave of 1/2 the bit rate.
<

Or 1/4, or 1/8, ... of the bit rate, so long as you break the HDLC rules.

Vic

19. [Fwd: modifications]

From: Dave Wolf <wo5h@tapr.org>
Date: Mon, 07 Oct 1996 20:31:48 -0500
To: netsig@tapr.org
Message-ID: <3259AF04.42B7@tapr.org>
Rendered body type: text/plain

Anyone able to help Hector out?

73 de Dave

20. Re: [NETSIG:2856] Re: Motorola Syntek radios on 9600 bd

From: bewhite@ibm.net
Date: Mon, 07 Oct 96 23:14:12
To: netsig@tapr.org
Message-ID: <9610080617.AA0019@localhost>
Rendered body type: text/plain

Hello Rowan,

Yes please we would like to get the docos. First let me check if we have a manual. I am not dealing with these radios myself but initially if you could send me the modification detail I will pass it on.

I suspect that they may have circuits etc but want to know what changes were found nedcessary.

73

Barry VK2AAB @ VK2WI
bewhite@ibm.net

21. Re: [NETSIG:2864] Re: FW: Re: TAPR Office to reduce to minimum operations

From: Carol Byers <crlbyers@garlic.com>
Date: Wed, 09 Oct 1996 12:35:16 -0700
To: netsig@tapr.org
Message-ID: <325BFE73.10CB@garlic.com>
Rendered body type: text/plain

Greg Jones wrote:

>
> Hi Michael.
>
> Thanks to Gwyn and Mike for their comments. Basically Dorothy doesn't want
> the issue broadcast, so we kept the message really low key. I have dropped
> my studies at UT for this month (big thanks to my profs in Austin) to be
> home with my folks while things develop in the next two to three weeks.
>
> I'll be at the office (i.e. home) while Dorothy is in Dallas with my dad.
> So -- I'll be trying to cope with a system I setup but never run :-). Plus
> try to work on my dissertation while my mind is diffently elsewhere.
>
> That is about all I want to say.
>
> See ya - greg, WD5IVD
>
>
> > On Thu, 3 Oct 1996 13:57:03 -0500 (CDT), Gwyn Reedy <gwyn@paccomm.com> wrote:
> >
> > >It is a personal family matter, thus the 'talk around.' I only know because I was chatting with
Greg yesterday and it came up.
> >
> > Well, that would have been enough to say. I'm glad we're treating our staff
> > kindly. I just like to know what's going on -- it's my organization too, after
> > all.
> >
> > --
> > Michael Harnois (mharnois@sbt.net)
> > No Organization whatsoever
> >
> >
Greg,

You and the TAPR staff are doing a great job ... I know that what every
you do there is a good reason, and I support your actions...

Carol W9HGI

22. Re: [NETSIG:2858] Re: TAPR Office to reduce to minimum operations

From: gsellers <gregs@twave.net>
Date: Fri, 11 Oct 1996 10:08:54 -0400

To: netsig@tapr.org
Message-ID: <325E54F6.67B2@twave.net>
Rendered body type: text/plain

Michael Harnois wrote:

>
> On Thu, 3 Oct 1996 10:33:32 -0500 (CDT), Greg Jones <wd5ivd@tapr.org> wrote:
>
> >TAPR Office to reduce to minimum operations Oct 3, 1996
>
> It seems rather odd to make an announcement like this and not say why,
> especially in a membership organization. Are only the inner circle allowed to
> know?
>
> --
> Michael Harnois (mharnois@sbt.net)
> No Organization Whatsoever

23. Digest...

From: "Daniel J. Meredith" <DMeredith@CELL1.COM>
Date: Mon, 21 Oct 96 10:57:46 MST
To: <netsig@tapr.org>
Message-ID: <vines.cQJ8+0av0mA@BAMATEMPE.CELL1.COM>
Rendered body type: text/plain

Is there a DIGEST available? I've tried the listproc but have been unable to come up with anything..

Thanks..

Daniel

24. Re: [NETSIG:2873] Digest...

From: Steve Stroh <strohs@halcyon.com>
Date: Mon, 21 Oct 1996 12:17:27 -0700 (PDT)
To: netsig@tapr.org
Message-ID: <Pine.ULT.3.93.961021121658.184B-100000@coho.halcyon.com>
Rendered body type: text/plain

On Mon, 21 Oct 1996, Daniel J. Meredith wrote:

> Is there a DIGEST available? I've tried the listproc but have been unable
> to come up with anything..
>
> Thanks..
>
> Daniel

Not at this time.

Steve N8GNJ
NetSIG Chairman

--
Steve Stroh N8GNJ strohs@halcyon.com | Amateur Spread Spectrum is
Amateur Radio TCP/IP n8gnj@sw.n8gnj.ampr.org | the wave of the present!

25. Getting NetSIG in Digest mode

From: Steve Stroh <strohs@halcyon.com>
Date: Wed, 23 Oct 1996 06:31:30 -0700 (PDT)
To: TAPR Networking SIG List <netsig@tapr.org>
Message-ID: <Pine.ULT.3.93.961023062620.673E-100000@coho.halcyon.com>
Rendered body type: text/plain

Thanks to the several readers who corrected my earlier statement that a Digest form of NetSIG isn't available.

A Digest form of NetSIG >IS< available.

Send a message to:
listserv@tapr.org

with the following in the message (no subject needed):
set netsig mail digest

Steve N8GNJ
NetSIG Chairman

--
Steve Stroh N8GNJ strohs@halcyon.com | Amateur Spread Spectrum is
Amateur Radio TCP/IP n8gnj@sw.n8gnj.ampr.org | the wave of the present!

26. X1J4 eeprom

From: r_denis@globalnet.hn (Ricardo Denis)
Date: Fri, 25 Oct 1996 12:43:54 -0600
To: netsig@tapr.org
Message-ID: <19961025185146127.AAA150@globalnet.hn>
Rendered body type: text/plain

Hola amigos,

I have an MFJ 1270c TNC2, it is currently being used as a dust collector/paper weight :-). I would like to turn it into an X1J4 node/IProuter. Could you please send me some info as to where I can purchase the corresponding eeprom(s). I downloaded the X1J4 program from UCSD but have no way of getting it burned in. Any help will be greatly appreciated.

73 de Rick, HR2KOS

27. Re: [NETSIG:2876] X1J4 eeprom

From: "Karl F. Larsen" <k5di@acca.nmsu.edu>
Date: Sat, 26 Oct 1996 10:38:20 -0600
To: netsig@tapr.org
Message-ID: <199610261638.KAA21000@acca.nmsu.edu>
Rendered body type: text/plain

Well Rick, there is no way to make an x1j node without making a e-prom chip with the software on it. And you need to modify the MFJ TNC a bit too. I don't know anything about mailing a e-prom to your QTH but the only solution to your problem is to buy a e-prom coding system and a blank e-prom, or getting someone to make it for you and mail it to you.

If you know how I can mail the e-prom I can make one for you. I will need to know the exact callsign for the node. I will make the node have default settings as I have used on all of mine. The cost will be postal cost plus \$10 for the e-prom and \$20 for my time. My guess is postal will be like \$10 so the total will be \$40.00.

karl k5di

At 01:44 PM 10/25/96 -0500, you wrote:
>Hola amigos,
>
>I have an MFJ 1270c TNC2, it is currently being used as a dust
>collector/paper weight :-). I would like to turn it into an X1J4
>node/IProuter. Could you please send me some info as to where I can purchase
>the corresponding eeprom(s). I downloaded the X1J4 program from UCSD but
>have no way of getting it burned in. Any help will be greatly appreciated.
>
>73 de Rick, HR2KOS
>
>
Karl F. Larsen ---- k5di@acca.nmsu.edu --- <http://acca.nmsu.edu/~k5di/> -->

28. post.office Message Action Form

From: Edwin Carrera <ecarrera@pananet.com>
Date: Sat, 26 Oct 1996 16:56:31 -0500
To: netsig@tapr.org
Message-ID: <1.5.4.32.19961026215631.002ca124@mail.pananet.com>
Rendered body type: text/plain

The address is dwborden@pananet.com

29. Re: [NETSIG:2877] Re: X1J4 eeprom

From: Sid Ashen-Brenner <sashen@midusa.net>
Date: Sat, 26 Oct 1996 22:42:14 -0500
To: netsig@tapr.org
Message-ID: <2.2.32.19961027024214.00686e3c@midusa.net>
Rendered body type: text/plain

At 11:42 AM 10/26/96 -0500, you wrote:

> Well Rick, there is no way to make an x1j node without making a
>e-prom chip with the software on it. And you need to modify the MFJ TNC a
>bit too. I don't know anything about mailing a e-prom to your QTH but the

>only solution to your problem is to buy a e-prom coding system and a blank
>e-prom, or getting someone to make it for you and mail it to you.
>
> If you know how I can mail the e-prom I can make one for you. I will
>need to know the exact callsign for the node. I will make the node have
>default settings as I have used on all of mine. The cost will be postal cost
>plus \$10 for the e-prom and \$20 for my time. My guess is postal will be like
>\$10 so the total will be \$40.00.
>
>karl k5di

Isn't \$20.00 just a bit steep for burning a single 27C512 Eprom? Figure that
it "might" take 10 minutes to set-up and burn the chip ... that's some
\$120.00 per hour. Nice work if you can get it, and it pays off the EPROM
Burner's cost in far less than 2 hours.

Whatever happened to the amateur radio spirit? Before I sold my EPROM
Burner, all I asked was that whoever needed the chip burned replace the one
that I provided, and pay the postage (if any). 27C512's are also available
for much less than \$10.00 each, especially if you buy them in any kind of
quantity (ten to twenty .. instead of one or two).

I don't normally say much, but this one just rubbed me the wrong way.

Sid n0obm
Sid Ashen-Brenner Salina, Kansas
Internet : sashen@midusa.net
AX-25 : n0obm @ n0obm.#ncks.ks.usa.noam

30. Re: [NETSIG:2851] Interconnecting via microwave

From: "G. Wolfe" <gwolfe@oboe.sound.net>
Date: Sun, 27 Oct 1996 01:13:00 -0500 (CDT)
To: netsig@tapr.org
Message-ID: <1.5.4.16.19961027011519.116fd25a@pop.sound.net>
Rendered body type: text/plain

At 07:51 PM 10/1/96 -0500, you wrote:
>We have an opportunity to link several nodes in Arizona via some full
>duplex channels on a microwave system. The channels are 'telephone
>bandwidth'. I was thinking that a way to accomplish this would be to use
>four-wire modems at each end. Can these be connected to a node stack via
>the RS-232 ports?
>
>Would there be any modifications to the modems required to support the
>netrom-type stack?
>
>Does anyone know of a source for used 4-wire modems? I suppose the faster
>the better, but the cheaper the better is more realistic, since I would
>expect that 4-wire modems are a bit pricier than standard 2-wire modems,
>although 9600 and 14400 modems might be available used for a reasonable
>price, since everybody seems to be upgrading.
>
>Is it possible to modify 2-wire modems to 4-wire operation?
>
>Does anyone have a better idea? I'd like to be able to go wide-band and
>see a faster rate, but this is to be piggybacked on a voice repeater
>linking system using surplus Granger/Telectra (sp?) equipment. Possibly
>multiple channels could be used to increase the throughput, although I
>haven't checked that out and am not familiar with the hardware required to
>do that.
>
>I assume that something like this was used to establish wormholes before
>Internet gateways existed, but don't have any details.
>
>Bob
>
>-----
>Bob Nielsen Internet: nielsen@primenet.com
>Tucson, AZ AMPRnet: w6swe@w6swe.ampr.org
> AX.25: w6swe@wb7tls.az.usa.noam
> http://www.primenet.com/~nielsen
>
>
>

A 2w circuit can be connected to a 4Wchannel by using a device
called a 4W term set. This device consists of a balanced hybrid which
splits the 2W energy into a TX and RX path on the 4W side. Make sure you
know if you are 600 or 900 ohm impedance. If the termination is not
properly matched you will not have good isolation between TX and RX. This

is the standard way a telephone circuit is transported over a transmission facility. Check the surplus markets and you may need a shelf assembly to mount and cross connect to the term set. Some channel bank assemblies which typically feed microwave systems have optional channel cards which provide the 2W hybrid with the channel unit.

Hope this helps

Greg

31. Re: X1J4 eeprom

From: aa7ya@juno.com
Date: Sun, 27 Oct 1996 01:32:22 MST
To: netsig@tapr.org
Message-ID: <19961027.013231.5383.2.aa7ya@juno.com>
Rendered body type: text/plain

On Sat, 26 Oct 1996 11:42:27 -0500 (CDT) "Karl F. Larsen" <k5di@acca.nmsu.edu> writes:

> If you know how I can mail the e-prom I can make one for you.

Wouldn't you know how to properly mail an eeprom?, even I know and I don't burn my eeproms.

> I will need to know the exact callsign for the node. I will make the node
> have default settings as I have used on all of mine. The cost will be
> postal cost plus \$10 for the e-prom and \$20 for my time. My guess is
> postal will be like \$10 so the total will be \$40.00.
>
> karl k5di

What??? I won't call on you Karl if you plan to charge MORE for your time and services than what it costs for one or perhaps four eeproms.

I have found places where I can get a 10 MHz speed eeprom for less than \$10.... And I got my eeprom burned for nothing, even when I said that I would pay that person just for doing so, but he said that he was doing the burn because he enjoys it. I ended up sending a blank eeprom instead to him that I bought along with the one that I wanted to be burned, because he was running low on extra eeproms.

Seems to me Karl has in effect started a business.

Stacey

32. Re: [NETSIG:2879] Re: X1J4 eeprom

From: "Karl F. Larsen" <k5di@acca.nmsu.edu>
Date: Sun, 27 Oct 1996 04:53:27 -0700
To: netsig@tapr.org
Message-ID: <199610271153.EAA24121@acca.nmsu.edu>
Rendered body type: text/plain

At 10:50 PM 10/26/96 -0500, you wrote:

>At 11:42 AM 10/26/96 -0500, you wrote:

>> Well Rick, there is no way to make an x1j node without making a
>>e-prom chip with the software on it. And you need to modify the MFJ TNC a
>>bit too. I don't know anything about mailing a e-prom to your QTH but the
>>only solution to your problem is to buy a e-prom coding system and a blank
>>e-prom, or getting someone to make it for you and mail it to you.
>>

>> If you know how I can mail the e-prom I can make one for you. I will
>>need to know the exact callsign for the node. I will make the node have
>>default settings as I have used on all of mine. The cost will be postal cost
>>plus \$10 for the e-prom and \$20 for my time. My guess is postal will be like
>>\$10 so the total will be \$40.00.
>>

>>karl k5di

>

>Isn't \$20.00 just a bit steep for burning a single 27C512 Eeprom? Figure that
>it "might" take 10 minutes to set-up and burn the chip ... that's some
>\$120.00 per hour. Nice work if you can get it, and it pays off the EPROM
>Burner's cost in far less than 2 hours.

Be real. It takes at least an hour to get set up, order the e-prom (I'm out of 512kb chips) and my computer card burner is very slow. It takes 20 minutes to burn and I do other things while that happens.

>
>Whatever happened to the amateur radio spirit? Before I sold my EPROM
>Burner, all I asked was that whoever needed the chip burned replace the one
>that I provided, and pay the postage (if any). 27C512's are also available
>for much less than \$10.00 each, especially if you buy them in any kind of
>quantity (ten to twenty .. instead of one or two).

I am retired, have 3 nodes up with the x1j software and don't need
10 or 20 chips!

>
>I don't normally say much, but this one just rubbed me the wrong way.

My days are busy. I could just have deleted the message and gone on.
He does not have to accept the offer. And you didn't need to say what you
did either.

>
> Sid n0obm
>Sid Ashen-Brenner Salina, Kansas
>Internet : sashen@midusa.net
>AX-25 : n0obm @ n0obm.#ncks.ks.usa.noam
>
73 de karl k5di

Karl F. Larsen ---- k5di@acca.nmsu.edu --- <http://acca.nmsu.edu/~k5di/> -->

33. Re: [NETSIG:2881] Re: X1J4 eeprom

From: "Karl F. Larsen" <k5di@acca.nmsu.edu>
Date: Sun, 27 Oct 1996 04:53:30 -0700
To: netsig@tapr.org
Message-ID: <199610271153.EAA24125@acca.nmsu.edu>
Rendered body type: text/plain

At 02:34 AM 10/27/96 -0600, you wrote:
>On Sat, 26 Oct 1996 11:42:27 -0500 (CDT) "Karl F. Larsen"
><k5di@acca.nmsu.edu> writes:

>
>> If you know how I can mail the e-prom I can make one for you.
>
>Wouldn't you know how to properly mail an eeprom?, even I know and
>I don't burn my eeproms.

>
>> I will need to know the exact callsign for the node. I will make the
>node
>> have default settings as I have used on all of mine. The cost will be
>> postal cost plus \$10 for the e-prom and \$20 for my time. My guess is
>> postal will be like \$10 so the total will be \$40.00.
>>

>> karl k5di

>
>What??? I won't call on you Karl if you plan to charge MORE for your
>time and services than what it costs for one or perhaps four eeproms.
>

Sure do like these "Experts" who have never made an e-prom and know
the going price for one with x1j on it. It makes me sick.

>I have found places where I can get a 10 MHz speed eeprom for less
>than \$10.... And I got my eeprom burned for nothing, even when I said
>that I would pay that person just for doing so, but he said that he was
>doing the burn because he enjoys it. I ended up sending a blank
>eeprom instead to him that I bought along with the one that I wanted to
>be burned, because he was running low on extra eeproms.

>
>Seems to me Karl has in effect started a business.

>
>Stacey
>

Not if you can help it. I DON'T want to make the guys e-prom. But I
am offering to help if nothing else shows up. Stacey why don't YOU make one
and send it to him?

karl

34. Re: [NETSIG:2879] Re: X1J4 eeprom

From: n5pvl@texoma.net (Charles Brabham)
Date: Sun, 27 Oct 1996 06:03:03 -0600 (CST)
To: netsig@tapr.org
Message-ID: <199610271203.GAA00285@mercury.texoma.net>
Rendered body type: text/plain

>At 11:42 AM 10/26/96 -0500, Sid wrote:
>> Well Rick, there is no way to make an x1j node without making a
>>e-prom chip with the software on it. And you need to modify the MFJ TNC a
>>bit too. I don't know anything about mailing a e-prom to your QTH but the
>>only solution to your problem is to buy a e-prom coding system and a blank
>>e-prom, or getting someone to make it for you and mail it to you.
>>
>> If you know how I can mail the e-prom I can make one for you. I will
>>need to know the exact callsign for the node. I will make the node have
>>default settings as I have used on all of mine. The cost will be postal cost
>>plus \$10 for the e-prom and \$20 for my time. My guess is postal will be like
>>\$10 so the total will be \$40.00.
>>
>>karl k5di
>

>snip<
>Whatever happened to the amateur radio spirit?
>snip<
>I don't normally say much, but this one just rubbed me the wrong way.

That's a good question, Sid! I was wondering about that myself.

73 DE Charles Brabham N5PVL
Packet Radio: N5PVL @ N5PVL.#NTX.TX.USA.NA
E-Mail : n5pvl@texoma.com
WWW : http://www.texoma.com/~n5pvl

35. Re: [NETSIG:2881] Re: X1J4 eeprom

From: mraff@zoomnet.net
Date: Sun, 27 Oct 1996 12:15:56 +0000
To: netsig@tapr.org
Message-ID: <199610271318.IAA23450@ns1.zoomnet.net>
Rendered body type: text/plain

> Seems to me Karl has in effect started a business.

Looks to me like that too!!!!!!!

His looooooooooooooooooooo packet signature says "Retired." I guess he's found
a new line of work. Bet he doesn't get much.

Mike - N8CUG

36. Re: [NETSIG:2885] Re: X1J4 eeprom

From: Steve Stroh <strohs@halcyon.com>
Date: Sun, 27 Oct 1996 05:31:02 -0800 (PST)
To: netsig@tapr.org
Message-ID: <Pine.ULT.3.93.961027052740.20209D-100000@chinook.halcyon.com>
Rendered body type: text/plain

The message thread regarding "services" in providing a programmed EPROM is
unproductive.

A request was made and an offer was extended. Whether or not the
requester accepts the offer is up to him.

Let's work to keep the signal-to-noise ratio on NetSIG a bit higher than
this, please.

Steve Stroh
NETSig Chairman and ML Moderator
strohs@halcyon.com

--
Steve Stroh N8GNJ strohs@halcyon.com | Amateur Spread Spectrum is

37. Re: [NETSIG:2879] Re: X1J4 eeprom

From: burt lang <burt@roccler.qc.ca>
Date: Sun, 27 Oct 1996 10:44:45 +0000
To: netsig@tapr.org
Message-ID: <32733D1C.4CFA@roccler.qc.ca>
Rendered body type: text/plain

Sid Ashen-Brenner wrote:

>
> At 11:42 AM 10/26/96 -0500, you wrote:
> > Well Rick, there is no way to make an x1j node without making a
> > e-prom chip with the software on it. And you need to modify the MFJ TNC a
> > bit too. I don't know anything about mailing a e-prom to your QTH but the
> > only solution to your problem is to buy a e-prom coding system and a blank
> > e-prom, or getting someone to make it for you and mail it to you.
> >
> > If you know how I can mail the e-prom I can make one for you. I will
> > need to know the exact callsign for the node. I will make the node have
> > default settings as I have used on all of mine. The cost will be postal cost
> > plus \$10 for the e-prom and \$20 for my time. My guess is postal will be like
> > \$10 so the total will be \$40.00.
> >
> > karl k5di
>
> Isn't \$20.00 just a bit steep for burning a single 27C512 Eprom? Figure that
> > it "might" take 10 minutes to set-up and burn the chip ... that's some
> > \$120.00 per hour. Nice work if you can get it, and it pays off the EPROM
> > Burner's cost in far less than 2 hours.
>
> Whatever happened to the amateur radio spirit? Before I sold my EPROM
> > Burner, all I asked was that whoever needed the chip burned replace the one
> > that I provided, and pay the postage (if any). 27C512's are also available
> > for much less than \$10.00 each, especially if you buy them in any kind of
> > quantity (ten to twenty .. instead of one or two).
>
> I don't normally say much, but this one just rubbed me the wrong way.
>
> Sid n0obm

Spoken like a true "modern day amateur" who has done more talking about
it than actually burning chips.

The following steps are required to properly burn an X1J EPROM for a
foreign "buyer":

- Setting up the equipment to burn one eprom
- loading the patch program
- setting up the proper parameters and double checking them
- burning the eprom
- finding a suitable TNC to test it in (you wouldn't send a chip all way
to a foreign country without checking that you did it right, would you)
- testing it for all parameters and functions
- finding suitable material to pack it in for shipment to a foreign
country
- packing it
- writing a covering letter
- taking the package to the post office
- filling out the customs form
- etc, etc.

In my experience that takes more than an hour, a lot more. I don't
begrudge Karl at all for the price he quoted. The modern day
plug'n'play ham who is unable and unwilling to do things for himself and
who needs others to do his electronic work for him, should be prepared
to pay regular commercial rates for it. Why should the 5% (or less) of
us who are able to do real hands on work competantly and have spent the
money to equip ourselves, work for free for those who are unwilling to
spend the time and money necessary to learn basic electronic hardware
skills. Showing a local, eager to learn, new amateur how to do the job
by demonstration, once or twice, is a different matter. It is called
"elmering" and is a very rewarding job (in satisfaction if not money).
Advice and verbal or written guidance to strangers on the other side of
the country should also be free in the ham spirit. Doing work for people
outside of your own region should be treated like a commercial business
and charged accordingly. If you don't like that, then learn to do it
yourself.

As for having the buyer replace the eeprom with another unit, it has been my experience that this is a losing proposition. Most of the time, the replacement eeprom is either an inferior speed to the one supplied, damaged in shipment, or doesn't work. And it costs more to mail than the cost of a surplus unit that can be bought by the hundreds in fleamarkets, etc. If the buyer cannot program an eeprom, then he also cannot test old ones and probably doesn't know the significance of the chip markings anyway. And once the deal is made you are stuck with it whether it works or not. Complaining and demanding another one just enflames the matter. Better to set a price and be done with it.

There are other alternate sources for the programming services. For example:

Amateur Networking Supplies,
PO Box 219,
Montvale, NJ 07645-0219
(201) 722-0144

Quotes a considerably lower price for programmed EPROMs in his catalogue.

Now to don my ceramic fiber (asbestos being environmentally incorrect) protective gear for the responses.

Burt VE2BMQ

38. Re: [NETSIG:2884] Re: X1J4 eeprom

From: Mike Curtis <wd6ehr@kaiwan.com>
Date: Sun, 27 Oct 1996 09:31:37 -0800 (PST)
To: netsig@tapr.org
Message-ID: <Pine.SUN.3.93.961027091818.20439C-100000@kaiwan009.kaiwan.com>
Rendered body type: text/plain

On Sun, 27 Oct 1996, Charles Brabham wrote:

```
> >> If you know how I can mail the e-prom I can make one for you. I will
> >>need to know the exact callsign for the node. I will make the node have
> >>default settings as I have used on all of mine. The cost will be postal cost
> >>plus $10 for the e-prom and $20 for my time. My guess is postal will be like
> >>$10 so the total will be $40.00.
> >>
> >>karl k5di
> >
> >
> >snip<
> >Whatever happened to the amateur radio spirit?
> >snip<
> >I don't normally say much, but this one just rubbed me the wrong way.
> >
> That's a good question, Sid! I was wondering about that myself.
```

While it's illegal to promote ones business via amateur radio, it's perfectly legal to do so here on the internet. And plenty of people make money from amateur radio, too. Sorry, folks, but I don't agree on this one. I see absolutely nothing improper in Karls asking what seems to me a very reasonable fee for his labor.

I suspect Karls guesstimate on postage is on the high side - it shouldn't cost more than a buck to mail an EPROM. I mail audio cassettes all the time for 78c. Of course, if it's overnight, then it's \$10.75. I haven't tried shipping EPROMs, but would imagine that a piece of conductive foam and a couple of pieces of cardboard would be sufficient if you mark the envelope properly (e.g. "Hand stamp", "Fragile", etc.) If Karl plans on using a more elaborate mailer, the price could be higher.

I think it might be more "proper" to put something into the subject field indicating it contains commercial content, because some hams export this list to amateur radio, and of course some subscribers might object personally to commercial content - but that's strictly my personal opinion, which doesn't even get me a second cup of coffee in the morning.

-- mike

39. Re: [NETSIG:2879] Re: X1J4 eeprom

pair of modems.

Coincidentally, I'm working on such a project right now. I'm hooking a pc to a device via microwave (simple 1200 baud over audio channel) for remote control of a rs-232 controlled switcher. We were working with a pair of donated 4-wire modems that turned out to be bad. I made a call to our HQ Friday to ask if anyone knew about properly configuring them. During the conversation, I was told that they have much cheaper devices out now. We paid something like \$250-300 for a pair at the time they were last purchased. I know nothing about them, but I'm supposed to have info Monday. He promised to mail it to me that afternoon. I'm told that they have, so far, survived lightning involvement, etc.

Good luck,
Gary

42. Re: [NETSIG:2883] Re: X1J4 eeprom

From: "Charles E. Gelm" <gelmc@erinet.com>
Date: Mon, 28 Oct 1996 07:57:54 -0800
To: netsig@tapr.org
Message-ID: <3274D802.375F@erinet.com>
Rendered body type: text/plain

<snipped the whole dang thing>

The 'rescuer' becomes the 'victim'

Chuck nc8q

43. Re: Removal from TAPR lists..... (fwd)

From: Steve Stroh <strohs@halcyon.com>
Date: Mon, 28 Oct 1996 06:03:41 -0800 (PST)
To: TAPR Networking SIG List <netsig@tapr.org>
Message-ID: <Pine.ULT.3.93.961028055540.13684A-100000@chinook.halcyon.com>
Rendered body type: text/plain

Since NetSIG is where some of the problems referred to took place, I felt it appropriate to cross post this onto NetSIG.

Just in case all NetSIG subscribers aren't aware of this, NetSIG has not been operating in "moderated mode" (where I approve or reject each posting) for several months now.

Steve N8GNJ
NetSIG Chairperson/Moderator

--

Steve Stroh N8GNJ strohs@halcyon.com | Amateur Spread Spectrum is
Amateur Radio TCP/IP n8gnj@sw.n8gnj.ampr.org | the wave of the present!

----- Forwarded message -----
Date: Mon, 28 Oct 1996 01:48:26 +0000 (GMT)
From: Barry McLarnon VE3JF <bm@lynx.ve3jf.ampr.org>
To: nos-bbs@hydra.carleton.ca
Cc: tcp-group@ucsd.edu
Subject: Re: Removal from TAPR lists.....

Brian Lantz wrote:

> Seems that in addition to NOT being considerate enough to RESPOND to my
> email messages, TAPR's 'leadership' were RUDE enough to remove my email
> address from all TAPR lists without my knowledge and without informing me
> of this.
>
> Aside from being COWARDLY, these actions have taken a BAD situation and
> made it FAR worse!
>
> TAPR *used* to be a respected organization, for ALL of packet radio. It
> has become a COUNTRY CLUB for a *select* few.
>
> The list of people who responded to my previous email about difficulties
> with TAPR reads like the 'Who's who' of Amateur Radio. NO ONE seems to
> feel it is viable any longer, and it's no wonder.
>
> I feel FOOLISH for defending TAPR's actions in the past, and the actions
> of the 'leadership' make me feel sorry for those paying dues to support
> the actions of such individuals.

Excuse the off-topic thread, folks, but Brian has made some serious

accusations which cannot go unanswered. I speak not only as an individual with a long history of involvement in packet radio, but also as a member of the board of directors of TAPR, the organization being maligned. Before you join the bandwagon to burn us at the stake, consider the following:

Fact: To our knowledge, nobody associated with TAPR removed Brian from any TAPR mailing lists. We would probably be justified in doing so, since he previously announced he was withdrawing from all TAPR-sponsored lists - but the fact is, we took no such action. The listserver software has the capability of automatically unsubscribing someone if his mail bounces. This might have happened in this case, but it's more likely that someone forged the unsubscribe messages that took him off the lists. This is quite easy to do. The mailing list system operates on a principle of trust that the participants will behave reasonably. Sometimes that trust is abused. In any case, Brian leaped to an unwarranted conclusion that TAPR took him off the lists.

Fact: Most of the TAPR mailing lists are unmoderated. For a few whose subject matter (BBS's and networking) tend to provoke religious wars, moderation has been imposed in an attempt to improve the SNR. Moderation is a compromise: it slows down the pace of a good discussion, and it produces a lot of work for the person(s) doing the moderating. And, to those who don't see eye-to-eye with the policy of the moderator, moderation = censorship. Sometimes, however, it is the only solution to keeping a mailing list viable. In the final analysis, the organization which establishes and facilitates the mailing list has the right to set whatever ground rules it feels are in the best interests of the majority of the list participants. Those who disagree with the policies can find another forum for their views. However, problems arise when the policies don't appear to be administered with an even hand. In this particular case, Brian apparently feels that he was singled out in an incident which took place back in September, being criticized on one of the moderated lists and then not being allowed to reply. As I understand it, there were extenuating circumstances. The list moderator lost his Internet access for several days and could not process the list mail. Brian's reply to his detractors was one of the messages caught in the queue during the outage, and he concluded that it had been "censored", and hit the roof. Things escalated from there, to the point that the moderator decided not to release further messages on the subject. So, there were some unfortunate circumstances, and possibly some errors in judgement - like the rest of us, list moderators are only human - but, certainly no conspiracy. This incident also took place while TAPR was preoccupied with preparations for the DCC in Seattle, so it's not surprising that it didn't get much attention from TAPR leadership at the time.

Fact: Although Brian claims to have been a supporter of TAPR in the past, membership records indicate that he has never been a member. As for the statement that a veritable "who's who" of amateur radio agree that TAPR is not a viable organization... well, that's an easy claim to make without any substantiation. I invite these unnamed folks to contact me and explain what their problems are with TAPR. As an active advocacy organization which is trying to advance packet radio into new realms (higher speed, spread spectrum, new HF data modems and protocols, use of Internet tools, etc), TAPR is certain to step on a few toes, but that doesn't make it less viable. A "country club"? Excuse my ignorance, but I've never belonged to one. What I see from the "inside" is a bunch of hard-working, dedicated, unpaid volunteers developing and testing kits, writing articles and books, putting on workshops and tutorials, publishing a newsletter, administering mailing lists and web pages, making bulk purchases on behalf of amateurs, mailing out info, and a host of other things. If this is a "country club", I guess they're okay in my book. Nope, it ain't perfect, but TAPR is doing a lot more than just blowing smoke, and it's doing it on behalf of a large constituency of amateurs, many of whom aren't even members. In my eyes, the folks associated with TAPR are definitely a "who's who", and I'm proud to be a part of it.

Barry

--

Barry McLarnon	VE3JF/VA3TCP		Internet: bm@hydra.carleton.ca
Ottawa Amateur Radio Club			AMPRnet: bm@lynx.ve3jf.ampr.org
Packet Working Group			Web: http://hydra.carleton.ca

44. Re: [NETSIG:2876] X1J4 eeprom

From: Chuck Hast <wchast@utilpart.com>
Date: Mon, 28 Oct 1996 11:49:21 -0500
To: netsig@tapr.org
Message-ID: <3274E411.1B69@utilpart.com>
Rendered body type: text/plain

Ricardo Denis wrote:

>
> Hola amigos,
>
> I have an MFJ 1270c TNC2, it is currently being used as a dust
> collector/paper weight :-). I would like to turn it into an X1J4
> node/IProuter. Could you please send me some info as to where I can purchase
> the corresponding eeprom(s). I downloaded the X1J4 program from UCSD but
> have no way of getting it burned in. Any help will be greatly appreciated.
>
> 73 de Rick, HR2K05

Estimado Ricardo:

Por los indicativos me parece que estas en Honduras, pais que he visitado varios veces. Habia unos "switch" ROSE instalado en tu pais al igual que otros paises de Centro America, no se en que se habra quedado la red, pero se que habia varios, si yo fuera a instalar algo en ese sentido yo instalaria un "switch" ROSE para asi integrarse al resto de la red.

Si las cosas han cambiado, que a mi parecer cuando estuve alla en Junio pasado, y por comentarios de otros colegas del area Centro Americana, creo que estan mas o menos iguales pues creo que ROSE es lo que estan usando en los de mas paises, ademas de que en ciertos paises de centro-america habia problemas legales con TheNet en cuanto a la identificacion de los que transitaban por la red.

Atte:

--
Chuck Hast
wchast@utilpart.com

kp4djt
ti3djt

45. Re: [NETSIG:2888] Re: X1J4 eeprom

From: Hank Oredson <Hank_Oredson@MENTORG.COM>
Date: Mon, 28 Oct 1996 09:32:31 -0800
To: netsig@tapr.org
Message-ID: <1.5.4.32.19961028173231.0068b488@em-wv03.wv.mentorg.com>
Rendered body type: text/plain

At 11:38 AM 10/27/96 -0600, you wrote:

>On Sun, 27 Oct 1996, Charles Brabham wrote:
>
>> >> If you know how I can mail the e-prom I can make one for you. I
will
>> >>need to know the exact callsign for the node. I will make the node have
>> >>default settings as I have used on all of mine. The cost will be postal
cost
>> >>plus \$10 for the e-prom and \$20 for my time. My guess is postal will be
like
>> >>\$10 so the total will be \$40.00.
>> >>
>> >>karl k5di
>> >
>>
>> >snip<
>> >Whatever happened to the amateur radio spirit?
>> >snip<
>> >I don't normally say much, but this one just rubbed me the wrong way.
>>
>> That's a good question, Sid! I was wondering about that myself.
>
>While it's illegal to promote ones business via amateur radio, it's
>perfectly legal to do so here on the internet. And plenty of people make
>money from amateur radio, too. Sorry, folks, but I don't agree on this
>one. I see absolutely nothing improper in Karls asking what seems to me a
>very reasonable fee for his labor.

This may be a first: I too agree with Karl. Go for it!

Hank Oredson @ Mentor Graphics

Library Operations

Internet : hank_oredson@mentorg.com "Parts 'R Us!"
Amateur Radio: W0RLI@W0RLI.0R.USA.NOAM

46. node software

From: WBRADFORD@delphi.com
Date: Mon, 28 Oct 1996 20:35:28 -0500 (EST)
To: netsig@tapr.org
Message-ID: <01IB6TZ0UCJM8Y59KR@delphi.com>
Rendered body type: text/plain

Subj[2]: eproms and programming, free

Sorry to have to say guys, but I thought sharing and spreading the technology and information of ham radio was one of the main ideas.

Somebody need an eprom for the MFJ=1270x?

I will provide to needy hams eproms and programming for most node software and chips. Free. Unless/until I get buried by requests or chip supply is gone (got quite a few).

If I can't help you, or you can't find another ham to help out, know that there are at least two hams-for-hire here on netsig. They'll do your programming for \$20/\$30 per hour.

Write me a private email with details and we'll talk.

wbradford@delphi.com Bill K7EA Salt Lake City k7ea@wb7ulh.ut

47. Re: [NETSIG:2896] node software

From: "Karl F. Larsen" <k5di@acca.nmsu.edu>
Date: Tue, 29 Oct 1996 02:54:01 -0700
To: netsig@tapr.org
Message-ID: <199610290954.CAA13591@acca.nmsu.edu>
Rendered body type: text/plain

At 07:42 PM 10/28/96 -0600, you wrote:

>Subj[2]: eproms and programming, free

>

>Sorry to have to say guys, but I thought sharing and spreading the technology and information of ham radio was one of the main ideas.

>

>Somebody need an eprom for the MFJ=1270x?

>

>I will provide to needy hams eproms and programming for most node software and chips. Free. Unless/until I get buried by requests or chip supply is gone (got quite a few).

Unless you stole the chips, they cost money...:-) You are willing to do someone elses work for them. Lots of someone elses.

Postage is not free. So YOU are willing to give money to stangers because they are hams.

I spread technology and information but that is done at the cost of my own time and \$10/mo for internet service, and TAPR's Sig cost. I do this for my own pleasure.

Karl F. Larsen ---- k5di@acca.nmsu.edu --- <http://acca.nmsu.edu/~k5di/> -->

48. Re: [NETSIG:2897] Re: node software

From: ssampson@othello.tinker.af.mil (Steve Sampson)
Date: Tue, 29 Oct 1996 06:11:38 -0600 (CST)
To: netsig@tapr.org
Message-ID: <9610291211.AA10158@othello.tinker.af.mil>
Rendered body type: text/plain

>

> Unless you stole the chips, they cost money...:-)

Not really. I had about 50 chips I got from a contractor return. Gave em all away. There's just a ton of these things on the surplus trail :-)

>

> You are willing to do someone elses work for them. Lots of someone elses.

>

You'd be surprised how cheap some Hams are. There's some fine EPROM programmers on the market, that are less than \$50 bucks. But it's the same thing with C compilers, people would rather have someone else compile the software, burn their EPROMS, etc. The trick is to use good barter techniques. "I'll burn your EPROM if you give me that beam antenna" :-)

Steve

49. High reliability PC's

From: Steve Stroh <strohs@halcyon.com>
Date: Tue, 29 Oct 1996 04:06:45 -0800 (PST)
To: TAPR Networking SIG List <netsig@tapr.org>
Message-ID: <Pine.ULT.3.93.961029035220.11627A-100000@chinook.halcyon.com>
Rendered body type: text/plain

I'd like to start a discussion thread on high-reliability PC's as used in Amateur Networking.

The Puget Sound Amateur Radio TCP/IP Network uses PC's as IP routers at the site of our combined UHF 9600 baud repeaters and 2m 1200 baud simplex nodes.

The sites are commercial cellular telephone base stations- older, larger base stations with the 100'+ towers with a reasonably large building- room temperature, stable power (interrupted weekly for a generator test).

The PC's are a typical amateur effort- spare parts of whatever was on sale when it was built. We've gradually improved the reliability of the system by adding uninterruptable power supplies, running Linux rather than NOS, adding a reset circuit that applies the PC's reset line if the PTT isn't active for 10 minutes or so.

Some questions for NetSIG:

- * Does anyone have any experience with "Industrial Grade PC's" like those made by companies such as Texas Microsystems and Advantech?

- * Does anyone know how to obtain such "Industrial Grade PC's" at reasonable cost? Anyone know any contacts for "scratch and dent" units that would presumably be cheaper?

- * Linux seems to be a lot more stable when handling large amounts of I/O than NOS. Any hints to make Linux MORE stable?

- * One reliability problem is the use of TNC's. Anyone converted a TNC using the TAPR 9600 baud modem with the clock/regen circuits to something like a Ottawa PI card to run an 9600 baud bit-regen repeater?

Thanks!

Steve N8GNJ
NetSIG Chairperson/Moderator
strohs@halcyon.com

--

Steve Stroh N8GNJ strohs@halcyon.com | Amateur Spread Spectrum is
Amateur Radio TCP/IP n8gnj@sw.n8gnj.ampr.org | the wave of the present!

50. Linux IP Router On A Floppy?

From: Steve Stroh <strohs@halcyon.com>
Date: Tue, 29 Oct 1996 04:31:15 -0800 (PST)
To: "AR TCP/IP Dev. List" <tcp-group@ucsd.edu>
Cc: TAPR Networking SIG List <netsig@tapr.org>
Message-ID: <Pine.ULT.3.93.961029042058.11821A-100000@chinook.halcyon.com>
Rendered body type: text/plain

There was some discussion on tcp-group about someone having built a boot floppy with Linux configured as an IP router. The goal, as I recall, was to have a very basic PC (ultimately no keyboard, no display, no hard disk) able to work as a Linux-based IP router, with Linux and the relevant initialization files contained on a floppy (or maybe a PCMCIA FlashRAM card). Unsaid was that this very simple implementation of Linux would probably be usable even by the *nix-impaired, likely by just editing the relevant config files.

The poster indicated that he had already done this and if there was interest he would make the info public. There seemed to be a lot of interest. Was the info every made public?

Steve N8GNJ

--

Steve Stroh N8GNJ strohs@halcyon.com | Amateur Spread Spectrum is
Amateur Radio TCP/IP n8gnj@sw.n8gnj.ampr.org | the wave of the present!

51. [NETSIG:2899] High reliability PC's

From: Howard Goldstein <hg@penny.n2wx.ampr.org>
Date: Tue, 29 Oct 1996 09:00:03 -0500
To: netsig@tapr.org
Message-ID: <199610291400.JAA03660@penny.n2wx.ampr.org>
Rendered body type: text/plain

Steve Stroh writes:

>
> I'd like to start a discussion thread on high-reliability PC's as used in
> Amateur Networking.
...

My day job had me evaluating fault tolerant PCs. The offerings are rather expensive, and except for the power supplies fault tolerance is not a practical goal unless you're prepared to write a lot of extra code to support it.

Fortunately most of the PC failures I've had in Florida have been power supply related, but YMMV

> * Linux seems to be a lot more stable when handling large amounts of
> I/O than NOS. Any hints to make Linux MORE stable?

Yes, replace with FreeBSD :-)

Seriously though there's a package advertised on sunsite that looks for important processes disappearing and/or locking up. It's probably worth checking out if robustness is important.

52. Re: [NETSIG:2898] Re: node software

From: "Charles E. Gelm" <gelmce@erinet.com>
Date: Tue, 29 Oct 1996 09:28:29 -0800
To: netsig@tapr.org
Message-ID: <32763EBD.4ABE@erinet.com>
Rendered body type: text/plain

Steve Sampson wrote:

<snip>
> You'd be surprised how cheap some Hams are. There's some fine
> EPROM programmers on the market, that are less than \$50 bucks.<snip>
> Steve Yo, Steve:

Please point me to EPROM programmers <= \$50.

Regards, Chuck nc8q

53. Re: [NETSIG:2899] High reliability PC's

From: Mike Murphree <n4cnw@ibm.net>
Date: Tue, 29 Oct 1996 11:19:39 -0500
To: netsig@tapr.org
Cc: dkelly@hiwaay.net
Message-ID: <32762E9B.7C95@ibm.net>
Rendered body type: text/plain

Steve Stroh wrote:

>
> I'd like to start a discussion thread on high-reliability PC's as used in
> Amateur Networking.

<SNIP>

> Some questions for NetSIG:
>
> * Does anyone have any experience with "Industrial Grade PC's" like those
> made by companies such as Texas Microsystems and Advantech?

Yes, I have purchased several dozen of the TMI models for automatic test

systems.

> * Does anyone know how to obtain such "Industrial Grade PC's" at
> reasonable cost? Anyone know any contacts for "scratch and dent" units
> that would presumably be cheaper?

No... not unless they are old, used models or you are buying a large quantity of them . I'm also not convinced that you will gain a lot by using these so-called ruggedized PCs at least in my experience. Most of the units use a processor-on-a-card concept with a passive backplane. This makes the processor pretty expensive (\$1-2K), plus the case with power supplies and fans are about \$1K. I believe that we saw just as many failures, if not more than conventional backplane PCs.

The primary reason that we used these systems are:

a) rack-mountable, b) much better fans than normal PCs, c) greater expansion capability (i.e. 13 slot backplanes). There were cases where we used a 13 slot chassis with an expansion chassis for over 20 slots available. We built systems where up to 4 computers were tied together each with their own I/O cards. Most people never have requirements like this...

If I were going to build a reliable PC for my own use, I would invest in a high quality motherboard and power supply. Also good reliable hard drives (i.e. Quantum). And don't forget proper cooling... The rack-mount cases are more of a convenience than anything else as most don't offer any shock-mounting capability.

> * Linux seems to be a lot more stable when handling large amounts of
> I/O than NOS. Any hints to make Linux MORE stable?

Never had any problem with the RELEASED Linux kernels... Ran for months at a time with TNOS loaded. Occasionally TNOS would crash but the TNOS FAQs adequately describe methods to handle that...

> * One reliability problem is the use of TNC's. Anyone converted a TNC
> using the TAPR 9600 baud modem with the clock/regen circuits to
> something like a Ottawa PI card to run an 9600 baud bit-regen repeater?

Not with the TAPR modem, but I will be looking into the design to satisfy my own needs in the next few months...

73

Mike N4CNW

54. Re: [NETSIG:2899] High reliability PC's

From: "Karl F. Larsen" <k5di@acca.nmsu.edu>
Date: Tue, 29 Oct 1996 09:24:33 -0700
To: netsig@tapr.org
Message-ID: <199610291624.JAA21161@acca.nmsu.edu>
Rendered body type: text/plain

At 06:16 AM 10/29/96 -0600, you wrote:

>

>I'd like to start a discussion thread on high-reliability PC's as used in
>Amateur Networking.

snip

>

>* Linux seems to be a lot more stable when handling large amounts of
>I/O than NOS. Any hints to make Linux MORE stable?

>

Steve there are DOS computers running Linux that have been in uninteruped service for greater than 1 year!

>* One reliability problem is the use of TNC's. Anyone converted a TNC
>using the TAPR 9600 baud modem with the clock/regen circuits to
>something like a Ottawa PI card to run an 9600 baud bit-regen repeater?

The "new" ax.25 software for Linux will talk to TNC's in the KISS mode and I have 2 Pac Comm Tiny-2 tncs with kiss e-proms that have run uninterupted for over 3 years! Both have the British 9600 baud modem installed.

>
>
>Thanks!
>
>Steve N8GNJ
>NetSIG Chairperson/Moderator
>strohs@halcyon.com
>
>--
>Steve Stroh N8GNJ strohs@halcyon.com | Amateur Spread Spectrum is
>Amateur Radio TCP/IP n8gnj@sw.n8gnj.ampr.org | the wave of the present!
>
>
Karl F. Larsen ---- k5di@acca.nmsu.edu --- <http://acca.nmsu.edu/~k5di/> -->

55. Re: [NETSIG:2900] Linux IP Router On A Floppy?

From: "Karl F. Larsen" <k5di@acca.nmsu.edu>
Date: Tue, 29 Oct 1996 09:24:35 -0700
To: netsig@tapr.org
Message-ID: <199610291624.JAA21164@acca.nmsu.edu>
Rendered body type: text/plain

Steve there are internet Gateways now using Linux but no tnos or jnos. They use the ax25 tools to drive the tnc(s) and the normal tcp/ip server built into Linux.

This same technique could be used on a computer configured to drive the tnc(s) at a node site. You can write files that will reboot Linux after a power loss and turn on the functions you wish. There are about 4 files required and I am using them here now.

I would want a way to connect to the computer via radio and upload and download files. This should be possible but I have not done it.

The IP router can't be on a floppy, and you would not want it to be so. I envision a 386 motherboard with 4 meg of ram and a 50 meg hard drive. No keyboard or monitor at the site.

At 06:50 AM 10/29/96 -0600, you wrote:

>
>There was some discussion on tcp-group about someone having built a boot
>floppy with Linux configured as an IP router. The goal, as I recall, was
>to have a very basic PC (ultimately no keyboard, no display, no hard disk)
>able to work as a Linux-based IP router, with Linux and the relevant
>initialization files contained on a floppy (or maybe a PCMCIA FlashRAM
>card). Unsaid was that this very simple implementation of Linux would
>probably be usable even by the *nix-impaired, likely by just editing the
>relevant config files.

>
>The poster indicated that he had already done this and if there was
>interest he would make the info public. There seemed to be a lot of
>interest. Was the info every made public?

>
>Steve N8GNJ
>
>--
>Steve Stroh N8GNJ strohs@halcyon.com | Amateur Spread Spectrum is
>Amateur Radio TCP/IP n8gnj@sw.n8gnj.ampr.org | the wave of the present!
>
>
Karl F. Larsen ---- k5di@acca.nmsu.edu --- <http://acca.nmsu.edu/~k5di/> -->

56. Re: [NETSIG:2901] High reliability PC's

From: Steve Stroh <strohs@halcyon.com>
Date: Tue, 29 Oct 1996 08:57:49 -0800 (PST)
To: netsig@tapr.org
Message-ID: <Pine.ULT.3.93.961029085537.17590A-100000@chinook.halcyon.com>
Rendered body type: text/plain

On Tue, 29 Oct 1996, Howard Goldstein wrote:

> > * Linux seems to be a lot more stable when handling large amounts of
> > I/O than NOS. Any hints to make Linux MORE stable?
>
> Yes, replace with FreeBSD :-)

>
> Seriously though there's a package advertised on sunsite that looks
> for important processes disappearing and/or locking up. It's probably
> worth checking out if robustness is important.

I knew my *nix illiteracy would surface, but I didn't expect to have to reveal it the same day of the posting :-)

I thought that one of the primary reasons for Amateurs to use Linux is that it supported Amateur hardware, such as KISS and PI cards "natively". Is this true for FreeBSD?

Steve N8GNJ

--

Steve Stroh N8GNJ strohs@halcyon.com | Amateur Spread Spectrum is
Amateur Radio TCP/IP n8gnj@sw.n8gnj.ampr.org | the wave of the present!

57. Re: [NETSIG:2899] High reliability PC's

From: Jeff King <jeff@mich.com>
Date: Tue, 29 Oct 1996 13:23:18 -0500
To: netsig@tapr.org
Cc: strohs@halcyon.com
Message-ID: <2.2.32.19961029182318.006adc04@mail.mich.com>
Rendered body type: text/plain

At 06:16 AM 10/29/96 -0600, Steve Stroh wrote:

>The PC's are a typical amateur effort- spare parts of whatever was on sale
>when it was built. We've gradually improved the reliability of the system
>by adding uninterruptable power supplies, running Linux rather than NOS,
>adding a reset circuit that applies the PC's reset line if the PTT isn't
>active for 10 minutes or so.

Is it a good idea to do a hard reset on a UNIX based system? It was my understanding it was not. I do this (watchdog) on my DOS based routers all the time, but never on unix. Just wondering.

>
>Some questions for NetSIG:
>

>* Linux seems to be a lot more stable when handling large amounts of
>I/O than NOS.

In a typical 'ham' application, thats not been my experince. With a stripped version of DOS-NOS with very few services, it seems to perform quite well as a router. See the attached heard list from 'oakgate' a 19.2kbaud radio equipped 12mhz 80286. The router handled over 1 million packets on the air last month. Ping times over the air are between 150-160ms. I've compared it with some of the LINUX 'routers' in the area and its latency is far shorter (over the air that is). Now, as soon as you start to run any services (bbs or convers to name a few) a DOS-NOS switch falls flat on its face. Attached is a heard list/stat info.

```
-----
: ms
: Core: 61216
: Up: 37:23:37:52
: Logins: 36
: Users: 1
: Count: 5
: Sent: 3
: Read: 0
: Rcvd: 0

: Area: wb8wka (#0) >
: j
: Interface Station Time since send Pkts sent
: ax0 WB8WKA-10 0:00:00:03 647207
: Station Time since heard Pkts rcvd : Station Time since heard Pkts rcvd
: WB8WKA-13 0:00:00:03 988459 : WB8WKA-10 0:00:00:03 645883
: WU8C-1 0:00:01:06 10883 : WB8WKA-15 8:17:02:20 1170
: DETQSO 8:17:12:08 25 : DL3SO-15 11:08:24:45 296
: DL3SO-1 11:08:24:47 161 : VE3AWI-15 14:15:07:48 11
: N8LBV-15 15:19:46:40 5 : WB8WKA-12 16:00:31:40 13
: KB0QYX-15 24:00:47:24 7 : KC8DBI-15 26:17:42:38 7
: VA3BEK-15 37:23:22:07 7
```

```
: Area: wb8wka (#0) >
: ports
: Available ports:
: ax0      : 19200 BAUD tcp/ip radio port, 430.55mhz Kantronics D4-10 with
Tiny-2 TNC
```

```
: Area: wb8wka (#0) >
-----
```

So, I wouldn't totally dismiss DOS as a viable ROUTER solution, although I can imagine any number of reasons to do so. But in our case, the 80286's were "FREE" at the time, and LINUX wasn't a option. If I ever get interested again, I'll likely upgrade it to a pentium running linux, but for now, its running and keeps the local ham club happy.

Good luck,

Jeff WB8WKA

58. Re: [NETSIG:2899] High reliability PC's

```
From: "Bob Hansen" <bob.hansen@bdk.com>
Date: Tue, 29 Oct 1996 13:08:00 -0700
To: netsig@tapr.org
Message-ID: <Megw.233241@primus.fabrik.com>
Rendered body type: text/plain
```

```
>
>* Does anyone have any experience with "Industrial Grade PC's" like
those
>made by companies such as Texas Microsystems and Advantech?
>
```

Our sister division used Texas Microsystems for a while, but found them LESS reliable than generic clones. They now just use clones, and put them in a NEMA 4 box if they are used in a harsh environment. We've been using a single-board computer with a passive backplane lately. Haven't used it enough to comment on its reliability, but we have had some problems with it. The connectors have no locking mechanism and the cables tend to come out under vibration; this shouldn't be a problem for Ham applications, but it is for industrial equipment. We've even had the processors come out! In fact, the boards didn't work with the 100MHz CPUs they were shipped with and we had to downgrade to 66Mhz. It does have some nice features like power saving modes, FLASH memory, etc.

In my (limited) experience, I'd say you get better value with standard equipment. Just try to keep the temperature consistent so you don't get a lot board flexing.

-Bob, N2GDE

59. Re: [NETSIG:2904] Re: High reliability PC's

```
From: Hank Oredson <Hank_Oredson@MENTORG.COM>
Date: Tue, 29 Oct 1996 11:14:23 -0800
To: netsig@tapr.org
Message-ID: <1.5.4.32.19961029191423.0069853c@em-wv03.wv.mentorg.com>
Rendered body type: text/plain
```

```
At 10:26 AM 10/29/96 -0600, you wrote:
>At 06:16 AM 10/29/96 -0600, you wrote:
>>
>>I'd like to start a discussion thread on high-reliability PC's as used in
>>Amateur Networking.
>      snip
>>
>>* Linux seems to be a lot more stable when handling large amounts of
>>I/O than NOS. Any hints to make Linux MORE stable?
```

>>
>
> Steve there are DOS computers running Linux that have been in
>uninteruped service for greater than 1 year!

We have several (> 12) PCs in our network as routers.
Most are at people's homes. Some are at mountain sites.
To date (over five years experience with them) we have
had no failures of the PCs themselves. We have had an
occasional "failed to reboot properly" failure ... i.e.
a software problem.

Hank Oredson @ Mentor Graphics Library Operations
Internet : hank_oredson@mentorg.com "Parts 'R Us!"
Amateur Radio: W0RLI@W0RLI.0R.USA.NOAM

60. Re: [NETSIG:2902] Re: node software

From: Hank Oredson <Hank_Oredson@MENTORG.COM>
Date: Tue, 29 Oct 1996 11:14:22 -0800
To: netsig@tapr.org
Message-ID: <1.5.4.32.19961029191422.006956d8@em-wv03.wv.mentorg.com>
Rendered body type: text/plain

At 08:30 AM 10/29/96 -0600, you wrote:
>Steve Sampson wrote:
><snip>
>> You'd be surprised how cheap some Hams are. There's some fine
>> EPROM programmers on the market, that are less than \$50 bucks.<snip>
>> Steve Yo, Steve:
>
> Please point me to EPROM programmers <= \$50.

Yes, that would be nice.
Last one I bought was \$115, and was the cheapest I could find.

Hank Oredson @ Mentor Graphics Library Operations
Internet : hank_oredson@mentorg.com "Parts 'R Us!"
Amateur Radio: W0RLI@W0RLI.0R.USA.NOAM

61. Thank u all

From: r_denis@globalnet.hn (Ricardo Denis)
Date: Tue, 29 Oct 1996 13:28:36 -0600
To: netsig@tapr.org
Message-ID: <19961029193732124.AAA177@globalnet.hn>
Rendered body type: text/plain

Amigos,

Thanks to all who replied to my request for an X1J4 eeprom info. I recieved
many offers through the SIG and privately and all will be taken into
account. Please excuse the upheaval my request may have caused.

Saludos de Rick, HR2K0S

62. Re: [NETSIG:2899] High reliability PC's

From: Chuck Hast <wchast@utilpart.com>
Date: Tue, 29 Oct 1996 15:47:14 -0500
To: netsig@tapr.org
Message-ID: <32766D52.4349@utilpart.com>
Rendered body type: text/plain

Steve Stroh wrote:
>
> I'd like to start a discussion thread on high-reliability PC's as used in
> Amateur Networking.
>
> The Puget Sound Amateur Radio TCP/IP Network uses PC's as IP routers at
> the site of our combined UHF 9600 baud repeaters and 2m 1200 baud simplex
> nodes.
>
> The sites are commercial cellular telephone base stations- older, larger
> base stations with the 100'+ towers with a reasonably large building- room
> temperature, stable power (interrupted weekly for a generator test).
>
> The PC's are a typical amateur effort- spare parts of whatever was on sale

> when it was built. We've gradually improved the reliability of the system
> by adding uninterruptable power supplies, running Linux rather than NOS,
> adding a reset circuit that applies the PC's reset line if the PTT isn't
> active for 10 minutes or so.
>
> Some questions for NetSIG:
>
> * Does anyone have any experience with "Industrial Grade PC's" like those
> made by companies such as Texas Microsystems and Advantech?
>
> * Does anyone know how to obtain such "Industrial Grade PC's" at
> reasonable cost? Anyone know any contacts for "scratch and dent" units
> that would presumably be cheaper?

At my place of work we are using a good number of rack mounted PC's for
a mobile
gateway product. These units are running windoz nt, with several serial
ports or
in one case talking to terminal servers off at a distance over a LAN.

The units which are used appear to use good quality mother boards, HD
and power
supplies. Good protection with a real UPS which goes thru the power
conversion to
provide regen-d AC seems to make these units quite bullet proof.

> * Linux seems to be a lot more stable when handling large amounts of
> I/O than NOS. Any hints to make Linux MORE stable?

I have a pc made up of el cheapo mutha board and bits and pieces, this
unit has
run behind a low cost UPS for months on end, even right through the
lightning season
without a problem. It runs LINUX and TNOS, seems not to have a problem.
I only take
it off line when I want to work on the hardware, which is to add some
bit or other.

>
> * One reliability problem is the use of TNC's. Anyone converted a TNC
> using the TAPR 9600 baud modem with the clock/regen circuits to
> something like a Ottawa PI card to run an 9600 baud bit-regen repeater?
I have done this with the RUH boards on a PacComm tiny II it made a good
regen-
I need to do another one for a repeater we want to put 9k6 data on here
in the
Tampa area. Just have not had the time to do the jumpers and other bits
and pieces
and get it into one box.

>
> Thanks!
>
> Steve N8GNJ
> NetSIG Chairperson/Moderator
> strohs@halcyon.com
>
> --
> Steve Stroh N8GNJ strohs@halcyon.com | Amateur Spread Spectrum is
> Amateur Radio TCP/IP n8gnj@sw.n8gnj.ampr.org | the wave of the present!

--
Chuck Hast
wchast@utilpart.com

kp4djt

63. Re: [NETSIG:2908] Re: High reliability PC's

From: Steve Stroh <strohs@halcyon.com>
Date: Tue, 29 Oct 1996 12:08:40 -0800 (PST)
To: netsig@tapr.org
Message-ID: <Pine.ULT.3.93.961029115951.20675F-100000@coho.halcyon.com>
Rendered body type: text/plain

Hmmm...

A consensus seems to be emerging that there's no significant benefit to be
gained from using "high reliability" / industrial PC's for use at Amateur
remote sites.

Any tips on powering PC's at unattended sites? We used some of the

smaller APC BackUPS uninterruptable power supplies, and my impression is that the Backups will shield the PC's power supply from the worst of power line transients, sags, etc. The SmartUPS would be better, but more expensive.

Any recommendations for cheap, reliable PC power supplies, or just use "clone de jour" and depend on the UPS to handle power line problems?

If I ever had to keep a site going off of 12 or 24 volts, I'd try out one of the small, relatively cheap 12 volt to 120 volt inverters like those from Statpower Technologies. Anyone had any experience with those in Amateur service (any sensitivities to RF?)

It sounds like, for the enclosure, it would work just fine to build a simple enclosure for a clone case that would have beefed up fans to insure plenty of airflow, and perhaps a simple foam filter for the fan intake, that's checked and cleaned during our semi-annual site visits.

Thanks for all the feedback!

Steve N8GNJ

--

Steve Stroh N8GNJ strohs@halcyon.com | Amateur Spread Spectrum is
Amateur Radio TCP/IP n8gnj@sw.n8gnj.ampr.org | the wave of the present!

64. Re: [NETSIG:2899] High reliability PC's

From: Steve Stroh <strohs@halcyon.com>
Date: Tue, 29 Oct 1996 11:59:08 -0800 (PST)
To: TAPR Networking SIG List <netsig@tapr.org>
Message-ID: <Pine.ULT.3.93.961029115106.20675D-100000@coho.halcyon.com>
Rendered body type: text/plain

On Tue, 29 Oct 1996, Jeff King wrote:

> At 06:16 AM 10/29/96 -0600, Steve Stroh wrote:
>
> >The PC's are a typical amateur effort- spare parts of whatever was on sale
> >when it was built. We've gradually improved the reliability of the system
> >by adding uninterruptable power supplies, running Linux rather than NOS,
> >adding a reset circuit that applies the PC's reset line if the PTT isn't
> >active for 10 minutes or so.
>
> Is it a good idea to do a hard reset on a UNIX based system? It was my
> understanding it was not. I do this (watchdog) on my DOS based routers
> all the time, but never on unix. Just wondering.

Good idea? No. Acceptable with Linux? Yes, or so I'm told. *nix has files open constantly and when power is removed, those files are toast. The saving grace is the File System Check on startup is thorough and can fix the great majority of file problems resulting from power losses.

The reset circuits were actually a legacy from when the PC's were running NOS, but we haven't had any disasters from them occasionally activating on a Linux PC.

> >* Linux seems to be a lot more stable when handling large amounts of
> >I/O than NOS.
>
> In a typical 'ham' application, that's not been my experience. With a
> stripped version of DOS-NOS with very few services, it seems to perform
> quite well as a router. See the attached heard list from 'oakgate' a
> 19.2kbaud radio equipped 12mhz 80286. The router handled over 1 million
> packets on the air last month. Ping times over the air are between 150-
> 160ms. I've compared it with some of the LINUX 'routers' in the area and
> its latency is far shorter (over the air that is). Now, as soon as you
> start to run any services (bbs or convers to name a few) a DOS-NOS
> switch falls flat on its face. Attached is a heard list/stat info.

We've experienced pretty much the same thing with NOS- the servers are what cause the problem. We are running servers of various kinds on our servers, though, and with Linux they're better. We recently upgraded our Internet gateway to 32 MB RAM and a fast CPU (forget which clone CPU it used, but the MB was cheap) and that seems to have helped the throughput a lot.

> So, I wouldn't totally dismiss DOS as a viable ROUTER solution, although I can
> imagine any number of reasons to do so. But in our case, the 80286's were "FREE"
> at the time, and LINUX wasn't a option. If I ever get interested again, I'll

> likely upgrade it to a pentium running linux, but for now, its running
and keeps
> the local ham club happy.

I'm interested in trying out KA9Q's latest with the new DJPPP codebase.
Needs a minimum of a 386, though.

Thanks for the comments!

Steve N8GNJ

--

Steve Stroh N8GNJ strohs@halcyon.com | Amateur Spread Spectrum is
Amateur Radio TCP/IP n8gnj@sw.n8gnj.ampr.org | the wave of the present!

65. [NETSIG:2906] Re: High reliability PC's

From: Howard Goldstein <hg@penny.n2wx.ampr.org>
Date: Tue, 29 Oct 1996 15:37:01 -0500
To: netsig@tapr.org
Message-ID: <199610292037.PAA00435@penny.n2wx.ampr.org>
Rendered body type: text/plain

Steve Stroh writes:

>
> On Tue, 29 Oct 1996, Howard Goldstein wrote:
>
> > * Linux seems to be a lot more stable when handling large amounts of
> > I/O than NOS. Any hints to make Linux MORE stable?
> >
> > Yes, replace with FreeBSD :-)
> >
> > Seriously though there's a package advertised on sunsite that looks
> > for important processes disappearing and/or locking up. It's probably
> > worth checking out if robustness is important.
>
> I knew my *nix illiteracy would surface, but I didn't expect to have to
> reveal it the same day of the posting :-)
>
> I thought that one of the primary reasons for Amateurs to use Linux is
> that it supported Amateur hardware, such as KISS and PI cards "natively".
> Is this true for FreeBSD?

I don't know if it is or not. With only 1200 baud stations around
here I've never felt compelled to run anything but straight ax.25;
the question never arose.

But do see the 2d part of my reply for something that might be helpful
should you stick with linux...

66. Re: [NETSIG:2907] Re: High reliability PC's

From: "Karl F. Larsen" <k5di@acca.nmsu.edu>
Date: Tue, 29 Oct 1996 14:31:32 -0700
To: netsig@tapr.org
Message-ID: <199610292131.OAA01424@acca.nmsu.edu>
Rendered body type: text/plain

At 12:28 PM 10/29/96 -0600, you wrote:

>At 06:16 AM 10/29/96 -0600, Steve Stroh wrote:

>
>>The PC's are a typical amateur effort- spare parts of whatever was on sale
>>when it was built. We've gradually improved the reliability of the system
>>by adding uninterruptable power supplies, running Linux rather than NOS,
>>adding a reset circuit that applies the PC's reset line if the PTT isn't
>>active for 10 minutes or so.
>
>
>Is it a good idea to do a hard reset on a UNIX based system?

Whatever for? I never do a hard reset on Linux. The reason being
that unix can have a lot of open files. If there is a hard reset these files
can be corrupted. When I turn off Linux I use reboot. You can use others but
reboot is easiest for me to remember...:-)

Reboot closes all files and goes a power down based on a control
file. A simple router might have domain.txt open but not much else.

It was my

>understanding it was not. I do this (watchdog) on my DOS based routers
>all the time, but never on unix. Just wondering.
>
>>
>
>
>So, I wouldn't totally dismiss DOS as a viable ROUTER solution, although I can
>imagine any number of reasons to do so. But in our case, the 80286's were
"FREE"
>at the time, and LINUX wasn't a option.

My experiance with JNOS in a window of Windows for Workgroups was
the same but over a 3-5 week period a "blue screen" event, caused by one
application getting into another applications ram space, would crash the
computer.

Perhaps if it is all that is running under DOS it would run for months.

If I ever get interested again, I'll
>likly upgrade it to a pentium running linux, but for now, its running and keeps
>the local ham club happy.
>
>Good luck,
>
>
>Jeff WB8WKA
>
>
Karl F. Larsen ---- k5di@acca.nmsu.edu --- <http://acca.nmsu.edu/~k5di/> -->

67. Remote Computer Operation

From: w5zit@juno.com (James H Brown)
Date: Tue, 29 Oct 1996 20:04:16 EST
To: netsig@tapr.org
Message-ID: <19961029.165607.8279.9.w5zit@juno.com>
Rendered body type: text/plain

Steve Stroh wrote:

>
> I'd like to start a discussion thread on high-reliability PC's as used
in
> Amateur Networking.

<SNIP>

Steve - I can't say that my installation was 'high reliability' - but I
had a system up for 5 months at a site 7500' up in the New Mexico
mountains during the summer of 1995. And I never had a glitch all summer
long - so maybe that is reliable enough.

I used an old XT floppy based computer with a V20 chip - left over from
the 80's. It had 4 serial ports - and a 720 k and a 360 k drive. No
hard drive.

I used a surplus Radio Shack UPS I bought at Hamcom in Arlington for 10
bux - and I never had to re-boot all summer due to any power fluctuations
- at a site that is known for many short outages - and in fact had one 40
minute outage that it rode thru all OK.

I used the G8BPQ IP router in the small amount of memory available while
running DesqView. Very little DOS memory is left over after
loading DOS and DesqView - but G8BPQ writes very compact programs in
assembly code - and I was able to run the G8BPQ node before loading
DesqView - and then run the G8BPQ PAC4 terminal program along with the
G8BPQ IP Router program in two DV windows. In addition - I had two
copies of a program I wrote in C that allow interface from the BPQ node
to an RS-232 port. One of these ports was interfaced to a Kantronics KAM
- and the other port was interfaced to an HF radio control interface I
use to put the HF radio in the scan mode - or to select VFO A or VFO B
for originating connects on HF Amtor/Pactor/Gtor. (for more info on this
remote HF Digital station, see the Digital Journal - Dec 94 for details)

I used the IP router to link stations in Roswell on 145.09 to stations in
Alamogordo on 147.54 thru a link on 446.8. Two MFJ 1270's were
used in the KISS mode for the radio TNC's. By the way - I used an X1J4
node prom in one of the units to allow the inclusion of the deviation and
signal strength data. Just select the KISS interface option for the X1J4

serial port to allow direct connection to a KISS configured BPQ port. I also got temp and battery voltage from the site thru the X1J4 node. Two RCA-700 radios were used for the VHF/UHF links.

Addressing the reliability again - I had to pour water out of the plastic keyboard case a couple of times when visiting the site - as I placed the keyboard over the front of the IC-751A radio to help prevent any leakage thru the cabinet from getting to the radio. (the system was located in an outdoor cabinet at the site) The keyboard is still working great! I don't recommend this for normal installations - but I figured the \$2 XT keyboard was cheap insurance for the HF radio!

I don't know of anybody else using the IP router in the G8BPQ code - but I found it to be straightforward to set up and it ran with no problems at all.

For an old XT to run only as a node/router I would recommend using the SWITCH program included with the BPQ node - as it provides both node and IP router capabilities with no multitasker required to run both functions. I had to use DesqView to allow me to use the two RS-232 port interfaces to the node.

Using the direct command mode of a KAM thru a packet connect proved to be an ideal way to use the HF radio at the noise-free site and with the extended double Zepp antenna I used for 40/30 meters the signal performance of the remote HF Digital station worked very well.

Feel free to query me about any of this info -

Jim

w5zit@juno.com

68. Re: [NETSIG:2900] Linux IP Router On A Floppy?

From: Bob Nielsen <nielsen@primenet.com>
Date: Tue, 29 Oct 1996 16:22:56 -0700 (MST)
To: netsig@tapr.org
Message-ID: <Pine.LNX.3.94.961029162133.3135A-100000@nielsen.tus.primenet.com>
Rendered body type: text/plain

On Tue, 29 Oct 1996, Steve Stroh wrote:

>
> There was some discussion on tcp-group about someone having built a boot
> floppy with Linux configured as an IP router. The goal, as I recall, was
> to have a very basic PC (ultimately no keyboard, no display, no hard disk)
> able to work as a Linux-based IP router, with Linux and the relevant
> initialization files contained on a floppy (or maybe a PCMCIA FlashRAM
> card). Unsaid was that this very simple implementation of Linux would
> probably be usable even by the *nix-impaired, likely by just editing the
> relevant config files.
>
> The poster indicated that he had already done this and if there was
> interest he would make the info public. There seemed to be a lot of
> interest. Was the info every made public?

An even more interesting approach would be that of the following message I just read on linux-kernel:

>From lkernel@fastware.kiev.ua Tue Oct 29 16:21:12 1996
Date: Tue, 29 Oct 1996 15:15:15 -0300 (GMT+3)
From: Egor Egorov <lkernel@fastware.kiev.ua>
To: linux-kernel@vger.rutgers.edu
Subject: BIOS

Hi. How do "LinuxBIOS" project goes on ? Is it started, or it was just talks?
I mean BIOS project for PC's for putting kernel in (Flash)ROM. As far as I know, Linux does not use BIOS at all (only to start), so why dont we just
..... BIOS out ? :)

Bob

Bob Nielsen Internet: nielsen@primenet.com
Tucson, AZ AMPRnet: w6swe@w6swe.ampr.org

69. Re: [NETSIG:2907] Re: High reliability PC's

From: Paul A Beltrani <beltrani@hawaii.edu>
Date: Tue, 29 Oct 1996 09:58:48 -1000
To: netsig@tapr.org
Message-ID: <Pine.GS0.3.93.961029095011.9773A-100000@uhunix4>
Rendered body type: text/plain

On Tue, 29 Oct 1996, Jeff King wrote:

> At 06:16 AM 10/29/96 -0600, Steve Stroh wrote:
>
>
>
> Is it a good idea to do a hard reset on a UNIX based system? It was my
> understanding it was not. I do this (watchdog) on my DOS based routers
> all the time, but never on unix. Just wondering.

Throwing the power switch or pushing the reset button on a un*x box is a BAD idea. Some pc systems can be smart enough to trap a ctrl-alt-del and shutdown gracefully.

You can do a software based scheduled reboot (e.g. reboot every morning at 4 am) by setting up a cron job. See the man pages re: cron, halt and shutdown for your flavor of un*x.

Of course this doesn't help you if the kernel has crashed.

- Paul, AH6NU

70. W W W SYTEMS ON PACKET????

From: kb8qir@wstcm1.westco.net (Jacob Tennant)
Date: Wed, 30 Oct 1996 07:06:32 -0600 (CST)
To: NETSIG@tapr.org
Message-ID: <199610301306.HAA28725@tapr.org>
Rendered body type: text/plain

Hello to everyone from KB8QIR, Jacob Tennant in Morgantown,WV

I am new to this NETSIG so please excuse any procedural errors I might make.

Have been looking at setting up a W W W system as talked about in the July 1995 issue of QST and was wondering if there is anyone actually running one of these systems in the real world and how is it working??

Around my area ,North-Central W.V., there is almost no 9600 activity since everyone is happy with 1200 capabilities BUT I AM NOT!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!

Also the tcp/ip activity is only a hit and miss since with only one or two stations at a time on the air with it you can't get or show the full benefits of it..

Any suggestions will be greatly appreciated.

Paketly-challenged

Jake kb8qir@mail.westco.net / kb8qir.ampr.org [44.58.00.56] /
kb8qir@w8sp.wv.usa.na

71. Re: [NETSIG:2913] Re: High reliability PC's

From: Mike Murphree <n4cnw@ibm.net>
Date: Wed, 30 Oct 1996 08:21:53 -0500
To: netsig@tapr.org
Message-ID: <32775671.FFC@ibm.net>
Rendered body type: text/plain

Steve Stroh wrote:

> Any tips on powering PC's at unattended sites? We used some of the
> smaller APC BackUPS uninterruptable power supplies, and my impression is
> that the Backups will shield the PC's power supply from the worst of power
> line transients, sags, etc. The SmartUPS would be better, but more
> expensive.

While I was in St. Petersburg, FL, I used two stages: a) normal surge strip (Triplite), and a APC UPS after it. St. Pete has the well-deserved reputation as the "Lightning Capital of the World". Actually our lightning protection contractor here says that it moves between Ocala (present QTH) and Ft. Meyers. But in reference to the Linux reset question, APC offers software packages at a small cost and I believe there are some free ones available for Linux that will monitor the UPS and drop the system back to single-user (safe) mode should the power fail for an extended length of time. I believe these packages have the capability to restart the system when power is restored. My BBS system (386DX-40) would run over 30 minutes on the UPS without monitor.

One important note is to ensure that your power line ground and antenna grounds are connected together, otherwise you will fry the RS-232 transceivers in your computer and TNCs if you take a strike or surge.

73
Mike N4CNW

72. Re: [NETSIG:2920] W W W SYTEMS ON PACKET????

From: Steve Sampson <ssampson@othello.tinker.af.mil>
Date: Wed, 30 Oct 1996 08:28:29 -0600
To: netsig@tapr.org
Message-ID: <3277660D.167E@othello.tinker.af.mil>
Rendered body type: text/plain

Jacob Tennant wrote:

>
> I am new to this NETSIG so please excuse any procedural
> errors I might make.

There's no procedure.

> Have been looking at setting up a W W W system as talked
> about in the July 1995 issue of QST and was wondering if
> there is anyone actually running one of these systems
> in the real world; and, how is it working?

No one uses it in Oklahoma.

> Around my area ,North-Central W.V., there is almost no
> 9600 activity since everyone is happy with
> 1200 capabilities, BUT I AM NOT!

Same for Oklahoma. I traded a KAM for a TEKK radio on the 9600 repeater in OKC, but the repeater is only a Watt or so, and I don't have a direct path. This repeater has been in the building mode for what must be 7 or 8 years now. I asked the current custodian if he needed help, or wanted someone to take it over and maybe increase the power. No reply. I've since ordered a TAPR 9600 modem with the parts to make a duplicate repeater, and am putting it together. I have an old duplexor from a voice repeater I put together when I first became a Ham. That's the point really, that building a repeater is a lot of fun. I've got a block diagram stuck on the wall, and little post-it notes for solution ideas for each stage.

> Also the tcp/ip activity is only a hit and miss since with
> only one or two stations at a time on the air with it
> you can't get or show the full benefits of it..

TCP/IP is really bad (Hell, anything is) at 1200. It's OK for a WW Network (BBS), but deficient for anything else. The bottom line: TCP/IP is just no fun at that speed.

> Any suggestions will be greatly appreciated.

Build a repeater. Show the result at a club show-n-tell. No ones really interested in ideas, only solutions, and the fact that a solution exists will attract more users. Maybe if enough club members are interested, you can get a quantity order price of crystals and TEKK radios.

Just my opinion...

Steve

73. Re: [NETSIG:2921] Re: High reliability PC's

From: Hank Oredson <Hank_Oredson@MENTORG.COM>
Date: Wed, 30 Oct 1996 09:29:54 -0800
To: netsig@tapr.org
Message-ID: <1.5.4.32.19961030172954.0067f89c@em-wv03.wv.mentorg.com>
Rendered body type: text/plain

At 07:21 AM 10/30/96 -0600, you wrote:
>Steve Stroh wrote:
>
>> Any tips on powering PC's at unattended sites? We used some of the
>> smaller APC BackUPS uninterruptable power supplies, and my impression is
>> that the Backups will shield the PC's power supply from the worst of power
>> line transients, sags, etc. The SmartUPS would be better, but more
>> expensive.
>
>While I was in St. Petersburg, FL, I used two stages: a) normal surge
>strip (Triplite), and a APC UPS after it. St. Pete has the well-deserved
>reputation as the "Lightning Capital of the World". Actually our lightning
>protection contractor here says that it moves between Ocala (present QTH)
>and Ft. Meyers. But in reference to the Linux reset question, APC offers
>software packages at a small cost and I believe there are some free ones
>available for Linux that will monitor the UPS and drop the system back
>to single-user (safe) mode should the power fail for an extended length
>of time. I believe these packages have the capability to restart the
>system when power is restored. My BBS system (386DX-40) would run over
>30 minutes on the UPS without monitor.
>
>One important note is to ensure that your power line ground and antenna
>grounds are connected together, otherwise you will fry the RS-232 transceivers
>in your computer and TNCs if you take a strike or surge.

Amen! We've been there and done that. Finally starting using some
good isolation on the rs-232 cables (things like 10 ohm resistors
in series with the signal grounds for example) and doing a good bonding job
on the frame grounds. Have not lost any rs-232 chips to surges
for about six months now.

Hank Oredson @ Mentor Graphics Library Operations
Internet : hank_oredson@mentorg.com "Parts 'R Us!"
Amateur Radio: W0RLI@W0RLI.OR.USA.NOAM

74. Industrial Grade PCs

From: David Rush <rush@op.ks.erg.sri.com>
Date: Wed, 30 Oct 1996 11:38:20 -0600
To: netsig@tapr.org
Message-ID: <199610301738.LAA14218@op.ks.erg.sri.com>
Rendered body type: text/plain

>* Does anyone have any experience with "Industrial Grade PC's" like those
>made by companies such as Texas Microsystems and Advantech?

I have zero personal experience on the topic, but it's my understanding
that the RFI output tolerances for "industrial" PCs is less stringent
than for "home" PCs. This tells me that I would be less likely to run
into interference problems with a home PC than an industrial one.

Just my \$0.02 worth...

David, n00xh

75. Re: [NETSIG:2922] Re: W W W SYTEMS ON PACKET????

From: Chris Sussmann <cmsuss@fullnet.net>
Date: Wed, 30 Oct 1996 13:20:05 -0600
To: netsig@tapr.org
Cc: ssampson@othello.tinker.af.mil
Message-ID: <1.5.4.16.19961030192005.230f5136@fullnet.net>
Rendered body type: text/plain

At 08:35 AM 10/30/96 -0600, you wrote:
>Jacob Tennant wrote:
>
>> Have been looking at setting up a W W W system as talked
>> about in the July 1995 issue of QST and was wondering if
>> there is anyone actually running one of these systems
>> in the real world; and, how is it working?
>
>No one uses it in Oklahoma.

Opps, Steve, I run a wireless web server in Enid (North Central) Oklahoma. You can access it either on 145.070@1200 (sorta slow) or 430.550@9600 (could be faster). I am thinking of having it on display November 2nd at the Enid Ham Fest.

>
>> Around my area ,North-Central W.V., there is almost no
>> 9600 activity since everyone is happy with
>> 1200 capabilities, BUT I AM NOT!
>
>Same for Oklahoma. I traded a KAM for a TEKK radio on the
>9600 repeater in OKC, but the repeater is only a Watt or so,
>and I don't have a direct path. This repeater has been in
>the building mode for what must be 7 or 8 years now. I asked
>the current custodian if he needed help, or wanted someone
>to take it over and maybe increase the power. No reply.
>I've since ordered a TAPR 9600 modem with the parts to make
>a duplicate repeater, and am putting it together. I have an old
>duplexor from a voice repeater I put together when I first
>became a Ham. That's the point really, that building a
>repeater is a lot of fun. I've got a block diagram stuck on
>the wall, and little post-it notes for solution ideas for
>each stage.

Steve, get in touch with KB0QJ, J Frank, and he is working on connecting OKC with Enid and here in Enid we are working with the Kansas bunch to connect to Kansas City. We are using X1J4 so that we do some IP Routing.

>
>> Also the tcp/ip activity is only a hit and miss since with
>> only one or two stations at a time on the air with it
>> you can't get or show the full benefits of it..
>
>TCP/IP is really bad (Hell, anything is) at 1200. It's OK for
>a WW Network (BBS), but deficient for anything else. The bottom
>line: TCP/IP is just no fun at that speed.
>
>> Any suggestions will be greatly appreciated.
>
>Build a repeater. Show the result at a club show-n-tell.
>No ones really interested in ideas, only solutions, and the
>fact that a solution exists will attract more users. Maybe
>if enough club members are interested, you can get a quantity
>order price of crystals and TEKK radios.
>
>Just my opinion...
>
>Steve
>
>
See ya-
Chris N1UOC
cmsuss@fullnet.net

76. Re: [NETSIG:2924] Industrial Grade PCs

From: Doug_Taylor@usdata.com
Date: Wed, 30 Oct 96 13:30:29 CST
To: netsig@tapr.org
Message-ID: <9609308467.AA846711079@ccmgate.usdata.com>
Rendered body type: text/plain

Good point, however "Industrial Grade" or "ruggedized" usually indicates higher temp tolerances, longer mtbf, mil spec compliance, intrinsically safe enclosures, etc. Rack mounted PCs and redundant fail-safe systems are also considered "Industrial Grade." FCC Class A and B emi and rfi standards are a different issue and some may be both "Industrial Grade" and FCC Class B compliant.

A source for info is the Industrial Computer Source, 800-523-2320.

Doug, AA7XC

Subject: [NETSIG:2924] Industrial Grade PCs
Author: netsig@tapr.org at USDATA-CCMGATE
Date: 10/30/96 12:03 PM

>* Does anyone have any experience with "Industrial Grade PC's" like those
>made by companies such as Texas Microsystems and Advantech?

I have zero personal experience on the topic, but it's my understanding
that the RFI output tolerances for "industrial" PCs is less stringent
than for "home" PCs. This tells me that I would be less likely to run
into interference problems with a home PC than an industrial one.

Just my \$0.02 worth...

David, n00xh

77. Re: [NETSIG:2920] W W W SYTEMS ON PACKET????

From: Chris Sussmann <cmsuss@fullnet.net>
Date: Wed, 30 Oct 1996 14:14:47 -0600
To: netsig@tapr.org
Cc: kb8qir@wstcm1.westco.net
Message-ID: <1.5.4.16.19961030201447.3a47b352@fullnet.net>
Rendered body type: text/plain

At 07:13 AM 10/30/96 -0600, you wrote:
>Hello to everyone from KB8QIR, Jacob Tennant in Morgantown,WV
>
>I am new to this NETSIG so please excuse any procedural errors I might make.
>
>Have been looking at setting up a W W W system as talked about in the July
>1995 issue of QST
>and was wondering if there is anyone actually running one of these systems
>in the real world
>and how is it working??

Jake,
I have been running something simmilar for a few months now. I run a
wireless web server in my local area. Also I can use my other internet
software over packet, ie Eudora and Netterm. It works and it works well.

>
>Around my area ,North-Central W.V., there is almost no 9600 activity since
>everyone is happy with
>1200 capabilities BUT I AM NOT!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!

To be straight with you, 9600 is medium speed. It is good for regular
(ax.25) packet. I have noticed that 9600 just might not be fast enough for
http. But this is only my opinion and I don't think amateur radio packet
souldn't settle for just 1200 or 9600. But that is a different discussion
all together.

>
>Also the tcp/ip activity is only a hit and miss since with only one or two
>stations at a time on the air with it
>you can't get or show the full benefits of it..

Maybe after you get this set up, take it to a club meeting or other type of
get-together and toot your own horn.

>
>Any suggestions will be greatly appreciated.
>
>Paketly-challenged
>
> Jake kb8qir@mail.westco.net / kb8qir.ampr.org [44.58.00.56] /
>kb8qir@w8sp.wv.usa.na
>
>
>

How I have my station set up is as follows:

Have a good working Jnos running. It must have good paths via netrom or
ax25, only because you said that the IP'ers are few and far between. Not
unlike the situation here in Oklahoma. We have resorted in asking any new
node-ops to use the X1J4 EProm for the IP routing.
Once you have it up and running, request another IP Address from your
coordinator. DL eatherax and pipe.com packages and follow the docs. They
are written fairly decent, even I was able to follow them and I am in no way
a networking expert. Once you have all of that running, it's time to set up
you software to use your Jnos (which is acting more like a router than a
server) to retrieve your mail and route your connect requests.

I suppose the ideal situation would be that a group of IP'ers would share the server load. They would each take one of the servers, ie one would take the smtp/pop, another might take the nntp, and yet another would set up a http server. And you would have X1J4 nodes to connect all the little IP LANs so that you could connect out of town. And, while I'm dreaming, all of this would take place at speeds no less than 19.2K. But I am dreaming!!!

Because Nos is a challenge just to get it running, this above dream might be a long ways off for my local area.

Jake, thanks for letting me babble and good luck with the set up!!
Chris N1UOC
cmsuss@fullnet.net

78. Re: [NETSIG:2924] Industrial Grade PCs

From: "John S. Burningham" <john.burningham@worldnet.att.net>
Date: Wed, 30 Oct 1996 20:13:06 -0500
To: netsig@tapr.org
Message-ID: <3277FD22.2998@worldnet.att.net>
Rendered body type: text/plain

David Rush wrote:

>
> >* Does anyone have any experience with "Industrial Grade PC's" like those
> >made by companies such as Texas Microsystems and Advantech?
>
> I have zero personal experience on the topic, but it's my understanding
> that the RFI output tolerances for "industrial" PCs is less stringent
> than for "home" PCs. This tells me that I would be less likely to run
> into interference problems with a home PC than an industrial one.
>
> Just my \$0.02 worth...
>
> David, n00xh

I have had alot of industrial experience with PCs housed in industrial cases (typically rack mounted). The "reason" for using these cases is to protect the computer from dirt (typically in the air), heat (you sometimes have to connect an external air conditioner to the cases), vibrations, chemicals, explosion proof, and just about every other industrial hazard.

Computers in these cases are typically "CLASS A" computing devices as opposed to the "CLASS B" required for home use. If you didn't know it, CLASS B devices have tighter RFI specifications per the FCC.

The only place I ever used one of these cases in Amateur Radio was for a mountian top Packet site. I modified the case for improved shielding and it worked fine. There are some rack mount cabinets that have a locking door and slideout internal shelf that allows you to use a regular PC inside with a good air filtering system for cooling.

john, wb8puf

79. RE: W W W systems on Packet

From: wb9mjn@wb9mjn.ampr.org
Date: Wed, 30 Oct 96 22:06:29 UTC
To: netsig@tapr.org
Message-ID: <11294@wb9mjn.ampr.org>
Rendered body type: text/plain

Hi,

I access Internet WWW thru a 9600 baud radio link. And its acceptable for me. Altho, I don t even start up , if i see other WWW traffic on the channel.

The perfomance, if ur gateway can keep the 9600 baud pipe full, is equivalent to the typical 14.4 KB ISP service.

73, Don.

Mailbox : WB9MJN @ N9HSI.IL.USA.NA
AMPRNet : wb9mjn@wb9mjn.ampr.org[44.72.98.19]
Internet: wb9mjn%wb9mjn.ampr.org@uugate.aim.utah.edu

80. Re: [NETSIG:2920] W W W SYTEMS ON PACKET????

From: "Ron Curry" <recurry@insighttec.com>
Date: Wed, 30 Oct 1996 20:19:52 -0800
To: <netsig@tapr.org>
Message-ID: <199610310422.UAA26852@yankee.insighttec.com>
Rendered body type: text/plain

Jacob,
Yes, it's a sad state of affairs. I have set up a web site on tcpip/packet here in CA on 9600 baud. I can attest that it's not useful unless you restrict the content to text only. 1200 baud is next to useless unless you are VERY patient - kind of like copying the phone book in morse code. 9600 and 1200 are best left to mail forwarding or some other low-speed task.

Cheers,
Ron

Ron Curry
KE6WED
recurry@insighttec.com
recurry@inside.intel.com

> From: Jacob Tennant <kb8qir@wstcm1.westco.net>
> To: netsig@tapr.org
> Subject: [NETSIG:2920] W W W SYTEMS ON PACKET????
> Date: Wednesday, October 30, 1996 5:13 AM
>
> Hello to everyone from KB8QIR, Jacob Tennant in Morgantown,WV
>
> I am new to this NETSIG so please excuse any procedural errors I might make.
>
> Have been looking at setting up a W W W system as talked about in the July
> 1995 issue of QST
> and was wondering if there is anyone actually running one of these systems
> in the real world
> and how is it working??
>
> Around my area ,North-Central W.V., there is almost no 9600 activity since
> everyone is happy with
> 1200 capabilities BUT I AM NOT!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
>
> Also the tcp/ip activity is only a hit and miss since with only one or two
> stations at a time on the air with it
> you can't get or show the full benefits of it..
>
> Any suggestions will be greatly appreciated.
>
> Paketly-challenged
>
> Jake kb8qir@mail.westco.net / kb8qir.ampr.org [44.58.00.56] /
> kb8qir@w8sp.wv.usa.na

81. Re: [NETSIG:2920] W W W SYTEMS ON PACKET????

From: aa7ya@juno.com
Date: Thu, 31 Oct 1996 03:04:06 MST
To: netsig@tapr.org
Message-ID: <19961031.030737.5383.6.aa7ya@juno.com>
Rendered body type: text/plain

On Wed, 30 Oct 1996 07:13:40 -0600 (CST) kb8qir@wstcm1.westco.net (Jacob Tennant) writes:

>Have been looking at setting up a W W W system as talked about in the
>July 1995 issue of QST and was wondering if there is anyone actually
>running one of these systems in the real world and how is it working??
>
>Around my area ,North-Central W.V., there is almost no 9600 activity
>since everyone is happy with 1200 capabilities BUT I AM NOT!!!!!!!!!!!!

No 9600 baud activity here either, so don't feel too bad. But, change is on the horizon, with the Montana backbone on 70cm at 9600 baud is coming this way!! (Hoo-ray!!!) I've been accustomed to 1200 baud for a number of years, and will definately agree that 9600 baud would make anyone that is used to 1200 baud happy.

Also, no one at this point is using WWW in Montana, so it is worthless for me to even use it here. I am not concerned about using WWW on packet yet, I have bigger priorities on my "Things To Do" list.... like purchasing equipment for the 9600 baud link soon to become a reality.

>Also the tcp/ip activity is only a hit and miss since with only one or
>two stations at a time on the air with it you can't get or show the full
>benefits of it..

I take it your in a rural area, like myself.

> Jake kb8qir@mail.westco.net / kb8qir.ampr.org [44.58.00.56] /
>kb8qir@w8sp.wv.usa.na
>
>
>

73 de Stacey, AA7YA
Packet: AA7YA@AA7YA.#NEMT.MT.USA.NOAM
E-mail: aa7ya@juno.com
Box 83 Whitetail, Montana 59276 (406) 779-3641

82. Re: [NETSIG:2920] W W W SYTEMS ON PACKET????

From: waljkh@ix.netcom.com (Dave Maciorowski)
Date: Thu, 31 Oct 1996 08:22:22 -0700
To: netsig@tapr.org
Cc: n0qcu@gw.n0qcu.ampr.org, ted@rmsd.com
Message-ID: <199610311522.HAA25328@dfw-ix8.ix.netcom.com>
Rendered body type: text/plain

Hi Jacob,

At 07:13 AM 10/30/96 -0600, Jacob Tennant wrote:

>Hello to everyone from KB8QIR, Jacob Tennant in Morgantown,WV
>
>I am new to this NETSIG so please excuse any procedural errors I might make.
>
>Have been looking at setting up a W W W system as talked about in the July
>1995 issue of QST
>and was wondering if there is anyone actually running one of these systems
>in the real world
>and how is it working??

We have been running a 9600 baud digital repeater serving northeast Colorado for two years now -- the southeast Colorado guys have had one running for over 3 years. Our repeaters pass more than 4 megabytes of data per day.

We operate an Internet firewall/gateway so that the guys on the LAN can access the Internet and AMPRnet, including Web services. They can use their usual Windows tools, eg. Eudora and Netscape, to do this.

Recently, one of the local BBSs accessed via our 9600 baud repeater added Web access. Try it out at <http://www.n0qcu.ampr.org/bbs/> via either the Internet or AMPRnet. Since it's accessed via 9600 baud, it'll give you some idea of the performance that you can expect. Note: since our repeater IS busy, the performance may vary at different times of the day.

Performance: for accessing the Web, 9600 baud isn't bad, but it IS slower than a 14.4 dialup modem. Though, as the Internet sags under the load, everyone will soon be at that speed :-). BTW, we encourage our users NOT to download graphics unless they're the only one on the repeater at the time!

We haven't been very good about keeping our Web Page up-to-date, but there is some information about our activities and local discussion list at <http://www.rmsd.com/hamradio/dwg.html>

73,

Dave

Dave Maciorowski, WA1JHK
Colorado Repeater Association, Inc.
Serving Colorado with Voice and Data, 6-Meters to 1.2 Gig

Internet: waljkh@ix.netcom.com or waljkh@amsat.org

83. [NETSIG:2931] Re: W W W SYTEMS ON PACKET????

From: wa7nwp@wa7nwp.ampr.org
Date: Thu, 31 Oct 1996 09:40:59 -0700 (MST)
To: netsig@tapr.org@gw.ve6lip.ampr.org
Message-ID: <m0vJ0Ax-0002qDC@mtewe.bigsky.com>
Rendered body type: text/plain

> From: aa7ya@juno.com
>
> no one at this point is using WWW in Montana,

Try:

```
telnet wa7nwp.ampr.org 80
GET /
```

:-)

Not that it's good for anything - it's just there..

It should be interesting when we get the multicasting working on HF. The Paksat protocol deals with files. WEB pages are files. Hmmm..

> >Also the tcp/ip activity is only a hit and miss since with only one or
> >two stations at a time on the air with it you can't get or show the full
> >benefits of it..
>
> I take it your in a rural area, like myself.
>
> > Jake kb8qir@mail.westco.net / kb8qir.ampr.org [44.58.00.56] /
>
> 73 de Stacey, AA7YA

Stacey's near the Montana, North Dakota and Canadian border. I'm half way between Great Falls and Lethbridge Alberta. We probably consider each other to the "really out in the sticks". :-) (His phone co-op came out with Internet connectivity before mine. I'm still waiting. :()

But I digress from networking... It's not until you see two TCP/IP stations with a direct connection, free of hidden transmitters, running in unconnected mode (Datagrams) that the slow speed of the Netrom network is really made obvious. Even at 1200 baud, such a connection is useable if not comfortable.

73,
Bill - WA7NWP

84. Re: [NETSIG:2932] Re: W W W SYTEMS ON PACKET????

From: cestey@millcomm.com (Carl Estey)
Date: Thu, 31 Oct 1996 11:42:38 -0600
To: netsig@tapr.org
Message-ID: <m0vJ18C-000MwUC@mill2.millcomm.com>
Rendered body type: text/plain

I tried the URL <http://www.n0qcu.ampr.org/bbs/> you gave however, I received the following error message: The requested URL /bbs/ was not found on this server.

Am I doing something wrong?

BTW, we built a 9K6 repeater here in the Minneapolis area on 2-meters but have had only a very few users (3!). The repeater is tied to our UHF backbone that is tied two 6 "cell" type VHF usewr ports. Our take is that people are afraid to spend the \$\$ to get on higher speeds because there isn't anything to do that they can't do at 1200 baud. Our solution is to add a Internet Gateway to the 9Kg 2-meter port and encourage use of Internet features. If people perceive they can't now do something that they would really like to do ... and it is cool and neat, they will buy the gear.

73,
Carl
Carl Estey, Amateur Radio Station WA0CQG

85. Re: W W W SYSTEMS ON PACKET????

From: wb9mjn@wb9mjn.ampr.org
Date: Thu, 31 Oct 96 11:25:27 UTC
To: netsig@tapr.org
Message-ID: <11303@wb9mjn.ampr.org>
Rendered body type: text/plain

Hi,

On 14.4 phone line versus 9600 packet WWW access. It all depends on how rural ur location is. Here in Chicagoland, the ISP s just are not keeping up, and rarely keep a bit pipe full. So, here, 9600 is about the same as 14.4 phone line. ISP server computers are doing more that just routing packets. I think that s probably the root of the problem, when there is a large user-ship. Same problem as using BBS s for NETROM routers.

N4PCR and N8NGB have fine tuned the packet parameters for WWW access too. The gateway, which is a direct hop here, out my 3 rd floor apartment window, with a flat panel antenna, sends packet frames for about 10 seconds at a time, and the ack for each one of these is a second long, by itself. There are many individual frames in the packet, as we can t repeal the laws of nature and make the BER better, just by tweaking parameters. That is, frame size is the same but on our highly reliable LAN, we can pump up the max frame, as it were. That gets things much more efficient, for WWW, but it limits the usefulness of multi access, while WWW activty is happening. The gateway DOES keep the 9600 baud pipe full. The thruput is about 600 bytes per second.

I would have to concur that anykinda multi hop 9600 baud WWW would only be useful with Text Only WWW operation. The backbones need to feed the 9600 baud LAN hop such that there is never a delay on the 9600 baud Lan hop, or the speed would be too slow. In other words, 9600 backbones are just too slow for this, even with full duplex , single access radio network topologies.

73, Don.

Mailbox : WB9MJN @ N9HSI.IL.USA.NA
AMPRNet : wb9mjn@wb9mjn.ampr.org[44.72.98.19]
Internet: wb9mjn%wb9mjn.ampr.org@uugate.aim.utah.edu

86. Re: [NETSIG:2932] Re: W W W SYTEMS ON PACKET????

From: n5pvl@texoma.net (Charles Brabham)
Date: Thu, 31 Oct 1996 13:14:45 -0600 (CST)
To: netsig@tapr.org
Message-ID: <199610311914.NAA02930@mercury.texoma.net>
Rendered body type: text/plain

> We operate an Internet firewall/gateway so that the guys on the LAN can
>access the Internet and AMPRnet, including Web services. They can use
>their usual Windows tools, eg. Eudora and Netscape, to do this.

This sounds like an excellent setup. I am curious as to the procedure used to protect yourself from "legal" hassles, as in the case where an attempt is made to use your system to access XXX WWW sites, download XXX graphics, ect. Not to mention the potential use of your gateway for business purposes, such as business as opposed to ham-related E-mail. I assume that you have set up safeguards to protect your license and discourage illegal use. If such safeguards do not exist, they sure need to!

73 DE Charles Brabham N5PVL
Packet Radio: N5PVL @ N5PVL.#NTX.TX.USA.NA
E-Mail : n5pvl@texoma.com
WWW : http://www.texoma.com/~n5pvl

87. Re: [NETSIG:2934] Re: W W W SYTEMS ON PACKET????

From: n8ivx@onebellevue.com (Steve Goff)
Date: Thu, 31 Oct 1996 14:15:03 -0500
To: netsig@tapr.org
Message-ID: <2.2.32.19961031191503.008571e4@[38.249.11.2]>
Rendered body type: text/plain

At 11:45 AM 10/31/96 -0600, you wrote:
>I tried the URL <http://www.n0qcu.ampr.org/bbs/> you gave however, I received
>the following error message: The requested URL /bbs/ was not found on this
>server.
>
>Am I doing something wrong?
>

I made it with <http://www.n0qcu.ampr.org/>

Slow loading the 43K graphic, but it loaded...

73 de Steve
NWOH Coordinator, Ohio Area Repeater Council, Inc.
Packet: N8IVX@N8IVX.#NWOH.OH.USA.NOAM
AmprNet: n8ivx@n8ivx.ampr.org [44.70.177.32]
E-Mail: n8ivx@onebellevue.com
Web: <<http://www.onebellevue.com/n8ivx/>> OR
<<http://38.249.11.2/n8ivx/>>

88. Re: [NETSIG:2932] Re: W W W Systems on Packet????

From: n5pvl@texoma.net (Charles Brabham)
Date: Thu, 31 Oct 1996 13:24:34 -0600 (CST)
To: netsig@tapr.org
Message-ID: <199610311924.NAA03551@mercury.texoma.net>
Rendered body type: text/plain

> Performance: for accessing the Web, 9600 baud isn't bad, but it IS
>slower than a 14.4 dialup modem. Though, as the Internet sags under the
>load, everyone will soon be at that speed :-) BTW, we encourage our users
>NOT to download graphics unless they're the only one on the repeater at the
>time!

On my home page there is an article; "HTML and Packet Radio", which
addresses the use of HTML in slow/medium networks. The URL is in my
"signature", for those who are interested in reading the article.

73 DE Charles Brabham N5PVL
Packet Radio: N5PVL @ N5PVL.#NTX.TX.USA.NA
E-Mail : n5pvl@texoma.com
WWW : <http://www.texoma.com/~n5pvl>

89. Re: [NETSIG:2933] Re: W W W SYTEMS ON PACKET????

From: Hank Oredson <Hank_Oredson@MENTORG.COM>
Date: Thu, 31 Oct 1996 11:24:29 -0800
To: netsig@tapr.org
Message-ID: <1.5.4.32.19961031192429.006aa568@em-wv03.wv.mentorg.com>
Rendered body type: text/plain

At 10:43 AM 10/31/96 -0600, you wrote:

>> From: aa7ya@juno.com

>>

>> no one at this point is using WWW in Montana,

>

>

>Try:

>

> telnet wa7nwp.ampr.org 80

> GET /

>

>:-)

>

>Not that it's good for anything - it's just there..

>

>It should be interesting when we get the multicasting working on

>HF. The Paksat protocol deals with files. WEB pages are

>files. Hmmm..

Yup ... some interesting potential here, involving "virtual web sites"
and web page caching. Take a look at the Pointcast application for one
example of things we might do ...

Hank Oredson @ Mentor Graphics Library Operations
Internet : hank_oredson@mentorg.com "Parts 'R Us!"
Amateur Radio: W0RLI@W0RLI.OR.USA.NOAM

90. Re: [NETSIG:2933] Re: W W W SYTEMS ON PACKET?

From: Steve Sampson <ssampson@othello.tinker.af.mil>
Date: Thu, 31 Oct 1996 14:21:58 -0600
To: netsig@tapr.org
Message-ID: <32790A66.794B@othello.tinker.af.mil>
Rendered body type: text/plain

wa7nwp@wa7nwp.ampr.org wrote:

>

> Stacey's near the Montana, North Dakota and Canadian border. I'm half
> way between Great Falls and Lethbridge Alberta.

I spent a few years in the Air Defense Command up there :-)
Even spent the night in Lethbridge on the way to Calgary.
Great place to visit... What was the radar site south of
there in Montana? I was over at Fortuna North Dakota. We
had an FPS-35 radar that operated at UHF around 430 MHz
I think. It was on a 5 story concrete tower. Should have
pretty good gain for packet :-) Those towers would be
excellent repeater sites.

Steve

November 1996

Original source file: netsig.9611

Source: http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.9611

1. Re: [NETSIG:2940] Re: W W W SYTEMS ON PACKET?

From: "Karl F. Larsen" <k5di@acca.nmsu.edu>
Date: Fri, 1 Nov 1996 06:21:17 -0700
To: netsig@tapr.org
Message-ID: <199611011321.GAA21482@acca.nmsu.edu>
Rendered body type: text/plain

At 02:45 PM 10/31/96 -0600, you wrote:
>wa7nwp@wa7nwp.ampr.org wrote:
>>
>> Stacey's near the Montana, North Dakota and Canadian border. I'm half
>> way between Great Falls and Lethbridge Alberta.
>
>I spent a few years in the Air Defense Command up there :-)
>Even spent the night in Lethbridge on the way to Calgary.
>Great place to visit... What was the radar site south of
>there in Montana? I was over at Fortuna North Dakota. We
>had an FPS-35 radar that operated at UHF around 430 MHz
>I think. It was on a 5 story concrete tower. Should have
>pretty good gain for packet :-) Those towers would be
>excellent repeater sites.

The best part is the bank of generators that provide 5 Gigawatts of
60 hz power. The packet node at that site has a *Great* antenna and runs
POWER!

Hard to hit but q-5 in Florida...:-)

>
>Steve
>

karl
Karl F. Larsen ---- k5di@acca.nmsu.edu --- <http://acca.nmsu.edu/~k5di/> -->

2. Re: [NETSIG:2934] Re: W W W SYTEMS ON PACKET????

From: waljkh@ix.netcom.com (Dave Maciorowski)
Date: Fri, 01 Nov 1996 12:52:00 -0700
To: netsig@tapr.org
Message-ID: <199611011952.LAA06488@dfw-ix7.ix.netcom.com>
Rendered body type: text/plain

Hi Carl,

>I tried the URL <http://www.n0qcu.ampr.org/bbs/> you gave however, I received
>the following error message: The requested URL /bbs/ was not found on this
>server.
>
>Am I doing something wrong?

OOPS, I mistyped :-} It's <http://gw.n0qcu.ampr.org/bbs/>

73,

Dave

Dave Maciorowski, WA1JHK
Colorado Repeater Association, Inc.
Serving Colorado with Voice and Data, 6-Meters to 1.2 Gig

Internet: waljkh@ix.netcom.com or waljkh@amsat.org
CRA: <http://www.rmsd.com/hamradio/cra/>

3. Re: [NETSIG:2936] Re: W W W SYTEMS ON PACKET????

From: waljkh@ix.netcom.com (Dave Maciorowski)
Date: Fri, 01 Nov 1996 12:52:05 -0700
To: netsig@tapr.org
Message-ID: <199611011952.LAA06522@dfw-ix7.ix.netcom.com>
Rendered body type: text/plain

Hi Charles,

>> We operate an Internet firewall/gateway so that the guys on the LAN can
>>access the Internet and AMPRnet, including Web services. They can use
>>their usual Windows tools, eg. Eudora and Netscape, to do this.
>
>This sounds like an excellent setup. I am curious as to the procedure used
>to protect yourself from "legal" hassles, as in the case where an attempt is
>made to use your system to access XXX WWW sites, download XXX graphics, ect.
>Not to mention the potential use of your gateway for business purposes, such
>as business as opposed to ham-related E-mail. I assume that you have set up
>safeguards to protect your license and discourage illegal use. If such
>safeguards do not exist, they sure need to!

We debated our policies for some time when we first put the
firewall/gateway on-line. We finally settled in on a set that are
comfortable for everyone.

Our club also operates four autopatches. Hams are familiar with the
rules associated with what you can do with an autopatch. Our autopatches
can be programmed to restrict access to individual numbers or groups of
numbers to prevent abuse, if required.

We have applied the same rules to Internet access. Our users are
familiar with these policies from using autopatches. Our firewall can be
programmed to restrict access to servers to prevent abuse here as well, if
required.

And, the firewall prevents non-hams from accessing the local LAN.

In all cases, our monitoring of usage has not identified any abuses.

73,

Dave

Dave Maciorowski, WA1JHK
Colorado Repeater Association, Inc.
Serving Colorado with Voice and Data, 6-Meters to 1.2 Gig

Internet: waljkh@ix.netcom.com or waljkh@amsat.org
CRA: <http://www.rmsd.com/hamradio/cra/>

4. Re: [NETSIG:2943] Re: W W W SYTEMS ON PACKET????

From: n5pvl@texoma.net (Charles Brabham)
Date: Sat, 2 Nov 1996 19:40:50 -0600 (CST)
To: netsig@tapr.org
Message-ID: <199611030140.TAA12567@mercury.texoma.net>
Rendered body type: text/plain

According to Dave, WA1JHK..

>Hi Charles,
> We debated our policies for some time when we first put the
>firewall/gateway on-line. We finally settled in on a set that are
>comfortable for everyone.
>
> Our club also operates four autopatches. Hams are familiar with the
>rules associated with what you can do with an autopatch. Our autopatches
>can be programmed to restrict access to individual numbers or groups of
>numbers to prevent abuse, if required.
>
> We have applied the same rules to Internet access. Our users are
>familiar with these policies from using autopatches. Our firewall can be
>programmed to restrict access to servers to prevent abuse here as well, if
>required.
>
> And, the firewall prevents non-hams from accessing the local LAN.
>
> In all cases, our monitoring of usage has not identified any abuses.
>
> 73,
>
> Dave
>
>-----
>Dave Maciorowski, WA1JHK
>Colorado Repeater Association, Inc.

> Serving Colorado with Voice and Data, 6-Meters to 1.2 Gig
>
>Internet: waijkh@ix.netcom.com or waijkh@amsat.org
>CRA: http://www.rmsd.com/hamradio/cra/

Sorry, Dave, but I only was able to follow you so far. I take it there is a restriction on which WWW sites can be accessed?

I don't see this as a big issue right now, but as more packet WWW access servers go online it may. As you mentioned, simple "manners" among hams is reliable more often than not.

Thanks for the info, and congrats on your setup. It sounds pretty nice!

73 DE Charles Brabham N5PVL
Packet Radio: N5PVL @ N5PVL.#NTX.TX.USA.NA
E-Mail : n5pvl@texoma.com
WWW : http://www.texoma.com/~n5pvl

5. Re: Linux IP Router On A Floppy?

From: Terry Dawson <terry@perf.no.itg.telstra.com.au>
Date: Tue, 05 Nov 1996 09:21:19 +1100
To: Steve Stroh <strohs@halcyon.com>
Cc: "AR TCP/IP Dev. List" <tcp-group@UCSD.EDU>,
TAPR Networking SIG List <netsig@tapr.org>
Message-ID: <327E6C5E.4FFE0AF9@perf.no.itg.telecom.com.au>
Rendered body type: text/plain

> The poster indicated that he had already done this and if there was
> interest he would make the info public. There seemed to be a lot of
> interest. Was the info every made public?

Steve,
I was one of the people involved. I had intended to have something available, but I didn't have an overwhelming response and I have a surplus of things on my todo list at the moment. I'll revisit it soon when I get some other items out of the way. Perhaps some of the others have something ready.

regards
Terry

6. Re: Linux IP Router On A Floppy?

From: "Steve Sampson" <ssampson@oklahoma.net>
Date: Tue, 5 Nov 1996 05:19:35 -0600
To: <netsig@tapr.org>
Message-ID: <199611051123.FAA05077@dns.okc>
Rendered body type: text/plain

There's been a lot of people claiming they could do it, but none has ever produced a working result. The best bet is to just run JNOS. It works fine at 1200 baud (where 99% of Hams are).

Terry Dawson writes:

> I was one of the people involved. I had intended to have something
> available, but I didn't have an overwhelming response and I have
> a surplus of things on my todo list at the moment. I'll revisit
> it soon when I get some other items out of the way.

Forget it. JNOS is fine. When you get rid of all that BBS bullshit, it's actually an acceptable router. KA9Q's version is also available, but I suspect it doesn't do socket compression, which makes the JNOS the most valuable solution. So what if the DNS sucks, so what if it doesn't do netrom well.

There's nothing a floppy version of Linux could offer over a DOS version. Maybe 20 years from now, when a few Hams start running at 200 kbps, but at 30 baud (effective) it's "too hard."

Steve

7. Re: [NETSIG:2946] Re: Linux IP Router On A Floppy?

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Tue, 5 Nov 1996 06:21:17 -0600

To: netsig@tapr.org
Message-ID: <v03007817aea4ddc4afad@[208.134.134.42]>
Rendered body type: text/plain

>Terry Dawson writes:

>

[snip]

>

>There's nothing a floppy version of Linux could offer over a DOS
>version. Maybe 20 years from now, when a few Hams start running
>at 200 kbps, but at 30 baud (effective) it's "too hard."

20 years?

Try the first or second quarter of next year at 115Kbps for like less than
\$400 (plug-n-play, assembled and tested! Just add box, power, and antenna)
Not the perfect solution for what we think we should be doing long term,
but a first step down the path of high-speed Spread Spectrum solutions.
Testing should begin in the next month or so, once the STA gets approved.

I think the entire issue of making average computers work in non-average
conditions, doing the type of communications routing we require is _very_
important. People have been doing it with success, so it is not magic.
There is nothing keeping us from implementing a standalone router based on
\$120 586 mother board, \$70 of memory, a good supply that will work in mixed
conditions, and for remote sites the need of a flashram card (maybe PCMCIA)
to boot from. If you talk to the people at Kodak doing floppies, they can
tell you some interesting stories about trying to use diskdrives in
semi-controlled environments.

Anyway, it is just a matter of sharing that knowledge and making what works
and what doesn't more widely known. This has been a very good thread thus
far on what people are using.

What does the group know about Flashcards (say 1M or 2M) in general in
PCMCIA, ISA, PCI configurations ? Vendors ? Prices ?

Cheers - Greg, WD5IVD
Pres TAPR

P.S. To find out more about the radios and the STA keep an eye on upcoming
PSRs and/or subscribe to the TAPR-BB announcements list. :-)

Greg Jones, WD5IVD
Austin, Texas
wd5ivd@tapr.org
<http://www.tapr.org/~wd5ivd>

8. Re: [NETSIG:2947] Re: Linux IP Router On A Floppy?

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Tue, 5 Nov 1996 07:22:25 -0600
To: netsig@tapr.org
Message-ID: <v03007801aea4efc86bf7@[208.134.134.42]>
Rendered body type: text/plain

>>Terry Dawson writes:

>>

>[snip]

>>

>>There's nothing a floppy version of Linux could offer over a DOS
>>version. Maybe 20 years from now, when a few Hams start running
>>at 200 kbps, but at 30 baud (effective) it's "too hard."

>

>20 years?

>

>Try the first or second quarter of next year at 115Kbps for like less than
>\$400 (plug-n-play, assembled and tested! Just add box, power, and antenna)

Oops.

That should have been just put the radio in the box with the supply and add
an antenna.

Cheers - Greg, WD5IVD

Greg Jones, WD5IVD

Austin, Texas
wd5ivd@tapr.org
<http://www.tapr.org/~wd5ivd>

9. Re: [NETSIG:2946] Re: Linux IP Router On A Floppy?

From: Jeff King <jeff@mich.com>
Date: Tue, 05 Nov 1996 12:05:01 -0500
To: netsig@tapr.org
Message-ID: <2.2.32.19961105170501.006cce80@mail.mich.com>
Rendered body type: text/plain

At 05:21 AM 11/5/96 -0600, Steve Sampson wrote:
>There's been a lot of people claiming they could do it, but none has ever
>produced a working result. The best bet is to just run JNOS. It works
>fine at 1200 baud (where 99% of Hams are).

It also works quite well at 19.2kbaud.

>
>-----
>
>Terry Dawson writes:
>
>> I was one of the people involved. I had intended to have something
>> available, but I didn't have an overwhelming response and I have
>> a surplus of things on my todo list at the moment. I'll revisit
>> it soon when I get some other items out of the way.
>
>Forget it. JNOS is fine. When you get rid of all that BBS bullshit,
>it's actually an acceptable router. KA9Q's version is also available,
>but I suspect it doesn't do socket compression, which makes the
>JNOS the most valuable solution. So what if the DNS sucks, so
>what if it doesn't do netrom well.

I'm not sure about "acceptable" (its not as good as my livingston)
but it certainly is "good enough".

>
>There's nothing a floppy version of Linux could offer over a DOS
>version. Maybe 20 years from now, when a few Hams start running
>at 200 kbps, but at 30 baud (effective) it's "too hard."
>
>Steve
>
>

Don't forget, and correct me if I am wrong, but all the 'routing'
with LINUX occurs via the unix kernal. With JNOS he is talking
direct to the hardware. CPU to CPU, its been my very unscientific
findings that JNOS is quicker as a router.

-Jeff wb8wka

Regards,

-Jeff King
Aero Data Systems, Inc.
P.O. Box 9325
Livonia, MI 48151 U.S.A.
V 1-810-471-1787, F 1-810-471-0279

10. Re: [NETSIG:2947] Re: Linux IP Router On A Floppy?

From: Jeff King <jeff@mich.com>
Date: Tue, 05 Nov 1996 12:37:50 -0500
To: wd5ivd@tapr.org
Cc: netsig@tapr.org
Message-ID: <2.2.32.19961105173750.006c62f8@mail.mich.com>
Rendered body type: text/plain

At 06:19 AM 11/5/96 -0600, Greg Jones, WD5IVD wrote:
>>Terry Dawson writes:
>>
>[snip]
>>
>>There's nothing a floppy version of Linux could offer over a DOS
>>version. Maybe 20 years from now, when a few Hams start running
>>at 200 kbps, but at 30 baud (effective) it's "too hard."

I've been running 173Kbps over the air now for over a year (granted, its part 15, but same difference) and JN05 seems to hold up well to the 115kbaud RS-232 serial rate if its configured as a router ONLY.

>
>20 years?
>
>Try the first or second quarter of next year at 115Kbps for like less than
>\$400 (plug-n-play, assembled and tested! Just add box, power, and antenna)
>Not the perfect solution for what we think we should be doing long term,
>but a first step down the path of high-speed Spread Spectrum solutions.
>Testing should begin in the next month or so, once the STA gets approved.

If you don't feel like waiting for the STA, there are plenty of Part 15 devices out there. FreeWave makes a OEM board that can be had for 300-400 dollars in sufficient quantities. I've used them and they work fairly well. In fact, I have a link to my ISP with a set of their production units. They indicated to me that they even would consider changing their hop sequence to be compliant with present amateur rules, (the chief engineer is a inactive ham) so you might consider chatting with them also.

Hey Greg, how about letting the membership participate in some of these things that are going on in the background? Some of us have done alot of work with spread spectrum and it seems ashame for TAPR not to take advantage of the experince. I for one have used quite a few different part 15 SS devices in commercial (read real world) applications and certainly could give TAPR my input on what you should look out for.

>
>What does the group know about Flashcards (say 1M or 2M) in general in
>PCMCIA, ISA, PCI configurations ? Vendors ? Prices ?

You should also check out PC/104. Its not as cheap as a ISA solution but it is rock solid. I use them in some of the embedded vehicle applications I have developed. Many of the boards (avantech for one) have built in flash sockets which should reduce your cost over having to go with a PCMCIA solution. PC/104's footprint is much smaller the a ISA/PCI motherboard while remaining fully compatible.

Regards,

Jeff wb8wka

11. Re: [NETSIG:2950] Re: Linux IP Router On A Floppy?

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Tue, 5 Nov 1996 16:45:57 -0600
To: netsig@tapr.org
Message-ID: <v03007811aea5734b53cd@[208.134.134.42]>
Rendered body type: text/plain

Jeff King writes:

>Hey Greg, how about letting the membership participate in some of these
>things that are going on in the background? Some of us have done alot
>of work with spread spectrum and it seems ashame for TAPR not to
>take advantage of the experince. I for one have used quite a few
>different part 15 SS devices in commercial (read real world)
>applications and certainly could give TAPR my input on what you
>should look out for.

There will be an announcement to the membership once some of the inital steps are taken to allow any TAPR member to particpate. Just keep an eye out here and on tapr-bb and in the PSR.

We would love to have you involved Jeff, with your previous experience.

>>
>>What does the group know about Flashcards (say 1M or 2M) in general in
>>PCMCIA, ISA, PCI configurations ? Vendors ? Prices ?

>You should also check out PC/104. Its not as cheap as a ISA solution but
>it is rock solid. I use them in some of the embedded vehicle applications
>I have developed. Many of the boards (avantech for one) have built in flash
>sockets which should reduce your cost over having to go with a PCMCIA
>solution. PC/104's footprint is much smaller the a ISA/PCI motherboard
>while remaining fully compatible.

I am familiar with eh PC/104 formfactor. After a lot of cost comparisions, the PC/104 is just to expensive once you add the additional items you need to it. I haven't been looking into this, but the numbers seem to indicate that it is more cost effective to locate a good motherboard mfg that has good thermal properties and outfit with what we need.

One question that keeps popping up in conversations is -- ISA or PCI bus ?

Thus, cost wise the PC/104 fromfactor is outside the \$400-\$500 for a fully configured ready to go node switch.

Cheers - Greg, WD5IVD

Greg Jones, WD5IVD
Austin, Texas
wd5ivd@tapr.org
<http://www.tapr.org/~wd5ivd>

12. Re: [NETSIG:2951] Re: Linux IP Router On A Floppy?

From: n5pvl@texoma.net (Charles Brabham)
Date: Tue, 5 Nov 1996 19:04:56 -0600 (CST)
To: netsig@tapr.org
Message-ID: <199611060104.TAA05921@mail.texoma.net>
Rendered body type: text/plain

According to Greg...

>Thus, cost wise the PC/104 fromfactor is outside the \$400-\$500 for a fully
>configured ready to go node switch.
>

I remember reading about the early TNC(1)'s going for around 225-250 bux when they first hit the "market".. That was a long time ago, and 400-500 for a much more complete setup now compares very favorably.

Of course, the new SS stuff will be a big step ahead of the venerable TNC2, just as the TNC1 was pretty high tech in it's day.. That's what you pay for.

There will be a lot of hams, I'm sure, who will balk at coughing up 400-500 bux. I probably will, unless my finances improve somewhat. Still, it's not really that bad for what you get. We're not used to paying that much, but we're not used to getting that much either.

You get what you pay for.

73 DE Charles Brabham N5PVL
Packet Radio: N5PVL @ N5PVL.#NTX.TX.USA.NA
E-Mail : n5pvl@texoma.com
WWW : <http://www.texoma.com/~n5pvl>

13. (no subject)

From: "Tim M. Tracy" <tmt@bright.net>
Date: Tue, 05 Nov 1996 21:20:15 -0500
To: netsig@tapr.org
Message-ID: <327FF5DE.7F08@bright.net>
Rendered body type: text/plain
list tbt@bright.net

14. Re: [NETSIG:2947] Re: Linux IP Router On A Floppy?

From: "Neal Winters" <nealwinters@cyberia.com>
Date: Tue, 5 Nov 1996 11:35:06 -0500
To: <netsig@tapr.org>
Message-ID: <199611060454.WAA13459@tapr.org>
Rendered body type: text/plain

Flash card info of interest to me also: Though not ham related. I have a Digital camera (Kodak dc50 which uses them) Neal Winters ,N3XYW ,
nealwinters@juno.com

> From: Greg Jones, WD5IVD <wd5ivd@tapr.org>
> To: netsig@tapr.org
> Subject: [NETSIG:2947] Re: Linux IP Router On A Floppy?

```

> Date: Tuesday, November 05, 1996 7:19 AM
>
> >Terry Dawson writes:
> >
> [snip]
> >
> >There's nothing a floppy version of Linux could offer over a DOS
> >version. Maybe 20 years from now, when a few Hams start running
> >at 200 kbps, but at 30 baud (effective) it's "too hard."
>
> 20 years?
>
> Try the first or second quarter of next year at 115Kbps for like less
than
> $400 (plug-n-play, assembled and tested! Just add box, power, and
antenna)
> Not the perfect solution for what we think we should be doing long term,
> but a first step down the path of high-speed Spread Spectrum solutions.
> Testing should begin in the next month or so, once the STA gets approved.
>
> I think the entire issue of making average computers work in non-average
> conditions, doing the type of communications routing we require is _very_
> important. People have been doing it with success, so it is not magic.
> There is nothing keeping us from implementing a standalone router based
on
> $120 586 mother board, $70 of memory, a good supply that will work in
mixed
> conditions, and for remote sites the need of a flashram card (maybe
PCMCIA)
> to boot from. If you talk to the people at Kodak doing floppies, they
can
> tell you some interesting stories about trying to use diskdrives in
> semi-controlled environments.
>
> Anyway, it is just a matter of sharing that knowledge and making what
works
> and what doesn't more widely known. This has been a very good thread
thus
> far on what people are using.
>
> What does the group know about Flashcards (say 1M or 2M) in general in
> PCMCIA, ISA, PCI configurations ? Vendors ? Prices ?
>
> Cheers - Greg, WD5IVD
> Pres TAPR
>
>
> P.S. To find out more about the radios and the STA keep an eye on
upcoming
> PSRs and/or subscribe to the TAPR-BB announcements list. :-)
>
>
> -----
> Greg Jones, WD5IVD
> Austin, Texas
> wd5ivd@tapr.org
> http://www.tapr.org/~wd5ivd
> -----
>

```

15. Re: [NETSIG:2950] Re: Linux IP Router On A Floppy?

```

From: Steve Stroh <strohs@halcyon.com>
Date: Wed, 6 Nov 1996 06:13:48 -0800 (PST)
To: netsig@tapr.org
Message-ID: <Pine.Ult.3.93.961105105652.3913A-100000@coho.halcyon.com>
Rendered body type: text/plain

On Tue, 5 Nov 1996, Jeff King wrote:

```

```

> You should also check out PC/104. Its not as cheap as a ISA solution but
> it is rock solid. I use them in some of the embedded vehicle applications
> I have developed. Many of the boards (avantech for one) have built in flash
> sockets which should reduce your cost over having to go with a PCMCIA
> solution. PC/104's footprint is much smaller the a ISA/PCI motherboard
> while remaining fully compatible.

```

Any suggestions for vendors other than Avantech? The requirements as I see them are:

Relatively inexpensive- probably upper end of \$350
DOS / Linux compatible (probably limits it to 386EX minimum)
Relatively inexpensive- see above
Some type of expansion capability- PC/104, PC Card, ISA for I/O and memory
Relatively inexpensive- see above
Tolerant/Robust power supply (may be handled by a small 12V to 120V inverter)
Relatively inexpensive- see above
"Small" (deliberately vague) form factor
Relatively inexpensive- see above

Really- cost is the major driver, with functionality and reliability secondary. I was reluctant to give up on the idea of a "TNC/386" that could be built from existing off the shelf components like PC/104 boards too, but the costs of the single board computers (that I've been able to find so far) are priced too high for what we have in mind for an IP router. I did see an interesting ad in Circuit Cellar Ink which sounds too good to be true that I'll be checking out today.

So... driven by cost and time, it seems we're back to some kind of pretty conventional PC.

--

Steve Stroh N8GNJ strohs@halcyon.com | Amateur Spread Spectrum is
Amateur Radio TCP/IP n8gnj@sw.n8gnj.ampr.org | the wave of the present!

16. Re: [NETSIG:2955] Re: Linux IP Router On A Floppy?

From: Jeff King <jeff@mich.com>
Date: Wed, 06 Nov 1996 12:08:33 -0500
To: strohs@halcyon.com
Cc: netsig@tapr.org
Message-ID: <2.2.32.19961106170833.006b3044@mail.mich.com>
Rendered body type: text/plain

Hi Steve:

At 08:16 AM 11/6/96 -0600, Steve Stroh wrote:

>

>On Tue, 5 Nov 1996, Jeff King wrote:

>

>> You should also check out PC/104. Its not as cheap as a ISA solution but
>> it is rock solid. I use them in some of the embedded vehicle applications
>> I have developed. Many of the boards (avantech for one) have built in flash
>> sockets which should reduce your cost over having to go with a PCMCIA
>> solution. PC/104's footprint is much smaller the a ISA/PCI motherboard
>> while remaining fully compatible.

>

>Any suggestions for vendors other than Avantech?

Try this: <http://www.controlled.com/pc104/products.html>
The avantech is the only one I have experince with.

>The requirements as I

>see them are:

>

>Relatively inexpensive- probably upper end of \$350

Nope, PC/104 won't do that

>DOS / Linux compatible (probably limits it to 386EX minimum)
PC/104 yes

>Relatively inexpensive- see above

>Some type of expansion capability- PC/104, PC Card, ISA for I/O and memory

>Relatively inexpensive- see above

>Tolerant/Robust power supply (may be handled by a small 12V to 120V
>inverter)

The power supply that I use is made by Tri-M. Can take 6-40volts.

>Relatively inexpensive- see above

>"Small" (deliberately vague) form factor
PC/104 yes

>Relatively inexpensive- see above

>

>Really- cost is the major driver, with functionality and reliability

>secondary.

Understood. When I was 25 my time was relatively cheap. Its not anymore. If you 'craft' a ISA bus clone, and keep it in a controlled enviroment, then yes, it can function quite well as a node switch. PC/104 meets all your requirements save one.... intial cost. However, I suspect your labor and maintence requirements would be far higher with a 'off the shelf' desktop PC. Remember, most good node sites are in uncontrolled enviroments. Dust, power spikes (lighting), huge temperture swings, vibration, moisture high ambient RF. When I had more time for this hobby, (and that I think is the key issue), I had 3 or 4 ISA bus node switches out in the field. But I was out every other weekend maintaining them. Now with children, a wife and more then a full time business, this is kinda hard to do. So my objectives may be different then others whose main goal is to save money by trading off robustness.

>I was reluctant to give up on the idea of a "TNC/386" that
>could be built from existing off the shelf components like PC/104 boards
>too, but the costs of the single board computers (that I've been able to
>find so far) are priced too high for what we have in mind for an IP
>router. I did see an interesting ad in Circuit Cellar Ink which sounds
>too good to be true that I'll be checking out today.

I'd like to hear about that. Just subscribed to CCI after getting it hit or miss (I missed this month) for the last few years on the news stand.

On the Advantech... the price I am paying on the PCM-4832 is 467.00, the AMD486DX4-100 is 37 and the heatsink is 4.00. Total would be 508. The PCM-4832 is a SBC with a PC/104 bus, has built in VGA, ethernet , flat panel driver, flash, IDE controller, Floppy controller, 2 550 serial, 1 par, watchdog timer and also a ROMdisk.

With a case, power supply and memory, I don't think you would want to budget less then \$700 for the complete unit.

>

>So... driven by cost and time, it seems we're back to some kind of pretty
>conventional PC.

The other issue that you overlooked about PC/104 is (as far as I know) none of the popular bus SCC cards are available for it. This may be the deciding factor even if you didn't consider cost. However, its still my contention that you'd SAVE time with PC/104 in the long run.

>

>

>--

>Steve Stroh N8GNJ strohs@halcyon.com | Amateur Spread Spectrum is
>Amateur Radio TCP/IP n8gnj@sw.n8gnj.ampr.org | the wave of the present!

>

>

>

73

Jeff King wb8wka

17. Re: [NETSIG:2956] Re: Linux IP Router On A Floppy?

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Wed, 6 Nov 1996 12:42:04 -0600
To: netsig@tapr.org
Message-ID: <v03007808aea68a042c28@[208.134.134.42]>
Rendered body type: text/plain

>>Relatively inexpensive- probably upper end of \$350

>

>Nope, PC/104 won't do that

You can get the EV386EX in the PC/104 config from Intel (via Wyle or whoever) for \$278 last I looked. Had some nice stuff on it. 1 SIM socket, 512K Flash (bootable).

Thus you could easily run JNOS (I believe) off the unit. I just sent John Ackermann a unit I got from someone to play with and see what he thought about it.

The issue then becomes, once you have bought into the PC/104 formfactor you are very limited by price and availability on what can be added. However, for the sites you mention below...it sounds like JNOS just as a router would be an option and could be run in many locations that other units wouldn't hold up.

>Understood. When I was 25 my time was
>relatively cheap. Its not anymore. If you 'craft' a ISA
>bus clone, and keep it in a controlled environment, then yes,
>it can function quite well as a node switch. PC/104 meets
>all your requirements save one.... initial cost. However, I
>suspect your labor and maintence requirements would be far
>higher with a 'off the shelf' desktop PC. Remember, most
>good node sites are in uncontrolled enviroments. Dust, power
>spikes (lighting), huge temperture swings, vibration, moisture
>high ambient RF. When I had more time for this hobby, (and that I
>think is the key issue), I had 3 or 4 ISA bus node switches
>out in the field. But I was out every other weekend maintaining
>them. Now with children, a wife and more then a full time business,
>this is kinda hard to do. So my objectives may be different then
>others whose main goal is to save money by trading off robustness.

The question should then be asked. WHy ? What was the problem ?

- a. Power Supplies ?
- b. How uncontrolled environment ? A would a better box have fixed it ?
- c. Were you trying to use IDE drives ?
- d. What else ?

>On the Advantech... the price I am paying on the PCM-4832 is 467.00, the
>AMD486DX4-100 is 37 and the heatsink is 4.00. Total would be 508. The
>PCM-4832 is a SBC with a PC/104 bus, has built in VGA, ethernet , flat
>panel driver, flash, IDE controller, Floppy controller, 2 550 serial, 1 par,
>watchdog timer and also a ROMdisk.

Then on the other hand, you can get several 586 boards for \$120 (minus memory) that have about the same thing.

The easy answer is that, a low cost PC motherboard will not fit every environment. In some cases, the node owner will have to install something that is more rugged than would normally be needed, or at least put something in a better box.

>With a case, power supply and memory, I don't think you would want to
>budget less then \$700 for the complete unit.

That is about what was calc using any of the PC/104 platforms. Since adding optional interfaces (i.e. PCMCIA interface) was stacking another PC/104 board on-top and everyone seems to be pretty prpud of their units (i.e. cost wise).

You could get away with something a little cheaper...but I believe the target price on a turnkey node (for people who don't want to do it themself from scratch) is going to be \$500 or less. Just attach radios.

The advantages of having a standard bus will be the available options that can be added that reduce the overall cost later. Do you want to use Pi-Cards, Ethernet cards, etc that many already have and don't need to purchase new.

Cheers - Greg

Greg Jones, WD5IVD
Austin, Texas
wd5ivd@tapr.org
<http://www.tapr.org/~wd5ivd>

18. Re: [NETSIG:2952] Re: Linux IP Router On A Floppy?

From: Hank Oredson <Hank_Oredson@MENTORG.COM>
Date: Wed, 06 Nov 1996 10:50:10 -0800
To: netsig@tapr.org
Message-ID: <1.5.4.32.19961106185010.0068ac4c@em-wv03.wv.mentorg.com>
Rendered body type: text/plain

At 07:07 PM 11/5/96 -0600, you wrote:
>According to Greg...

>
>>Thus, cost wise the PC/104 formfactor is outside the \$400-\$500 for a fully
>>configured ready to go node switch.
>>
>
>I remember reading about the early TNC(1)'s going for around 225-250 bux
>when they first hit the "market".. That was a long time ago, and 400-500 for
>a much more complete setup now compares very favorably.

\$350 with the "Gucci" cabinet.

Hank Oredson @ Mentor Graphics Library Operations
Internet : hank_oredson@mentorg.com "Parts 'R Us!"
Amateur Radio: W0RLI@W0RLI.0R.USA.NOAM

19. MVS 386EX SBC

From: Steve Stroh <strohs@halcyon.com>
Date: Wed, 6 Nov 1996 13:10:42 -0800 (PST)
To: TAPR Networking SIG List <netsig@tapr.org>
Message-ID: <Pine.ULT.3.93.961106121348.27561A-100000@chinook.halcyon.com>
Rendered body type: text/plain

A product from MVS, P.O. Box 850, Merrimack, NH 03054, 508-792-9507 voice,
508-757-8769 fax has me interested. (Before you ask, no, I don't know if
they have a Web site or e-mail- none is indicated in their ads).

The product is called 386EX Single Board Computer, P/N MVSEX2. By my
calculations, its cost in 100 piece quantities is \$210.00.

The 386EX SBC specs are (very tersely summarized) is that it's PC
compatible- it will boot and run DOS (and Windows...). Processor is a 50
MHz 386EX. It comes with a PC bus connector (as in 8-bit data XT, not
16-bit data AT), has no onboard video or keyboard ports, but has 5
8250-equivalent onboard serial ports and two parallel ports. It can be
plugged into a passive bus and used to build up a full PC (although their
customers seldom do that). A custom ROM can be burned, and it will boot
from the ROM. Memory is 128K RAM, 128K Flash Disk, up to 64 MB RAM, 1 MB
ROM.

This thing seems nearly too good to believe, especially the prices. They
claim it's fully PC compatible if you need that, or completely
customizable if you want that. In 1000+ quantities, price can be as low
as \$113!

It would seem to me that NOS could be rewritten to not require DOS
services, and thus run in this unit as standalone. The only thing that
concerns me somewhat is the 8250 serial ports, although running at 50 MHz
and no DOS overhead to contend with, or using, say, a PI card and Ethernet
card might make that a non-issue.

Anyone have any experience with these units?

Steve N8GNJ

--
Steve Stroh N8GNJ strohs@halcyon.com | Amateur Spread Spectrum is
Amateur Radio TCP/IP n8gnj@sw.n8gnj.ampr.org | the wave of the present!

20. Re: [NETSIG:2957] Re: Linux IP Router On A Floppy?

From: Jeff King <jeff@mich.com>
Date: Wed, 06 Nov 1996 16:47:56 -0500
To: netsig@tapr.org
Message-ID: <2.2.32.19961106214756.006a0f98@mail.mich.com>
Rendered body type: text/plain

At 12:43 PM 11/6/96 -0600, Greg Jones, WD5IVD wrote:
>>>Relatively inexpensive- probably upper end of \$350
>>
>>Nope, PC/104 won't do that
>
>You can get the EV386EX in the PC/104 config from Intel (via Wyle or
>whoever) for \$278 last I looked. Had some nice stuff on it. 1 SIM socket,
>512K Flash (bootable).

I think Steve meant \$350 out the door. I assume you have to wrap a
case and power supply around that unit. Also, the price I was
thinking of was for a 486DX-100 all-in-one PC/104 form factor.

>> Remember, most
>>good node sites are in uncontrolled environments. Dust, power
>>spikes (lighting), huge temperature swings, vibration, moisture
>>high ambient RF. When I had more time for this hobby, (and that I
>>think is the key issue), I had 3 or 4 ISA bus node switches
>>out in the field. But I was out every other weekend maintaining
>>them. Now with children, a wife and more than a full time business,
>>this is kinda hard to do. So my objectives may be different than
>>others whose main goal is to save money by trading off robustness.
>
>The question should then be asked. WHY ? What was the problem ?

Have you ever done multi node installations at the same site as multiple 50KW transmitters? How about a 200kw UHF? Or in a unheated AM transmitter building? How about on top of a 150 foot grain silo? These are NASTY sites. In the midwest we don't have mountains so there is a lot of co-location at existing commercial sites. That's not to say we didn't learn a lot about improving reliability (see below) but these are challenging environments.

I was also involved with a Navy SBIR in 1986 to develop a ruggedized PC. ISA was the only game in town. So some of my experiences relate from that. OK, you want to do a ruggedized ISA/PCI node on a ham budget (free labor). Here is how:

>
>a. Power Supplies ?

Yeap. Big problem. They are dust magnets. Negative pressure in the case. Flip the fan over (so the case is now at a positive pressure, and put a filter on the input.

>b. How uncontrolled environment ? A would a better box have fixed it ?

Lets see..... On the roof of a 400 foot building in the midwest. The steam pipes break one winter and we go up to find a 1 inch coating of ice on the PC (I'm serious). I don't think anything would have fixed that (short of conformal coating). Desktop PC's need to be in a controlled environment.

>c. Were you trying to use IDE drives ?

Actually, I've not had much problem with IDE drives. The old MFM's of the past caused a lot of heartache on the various gateways I was involved in, but that's not a issue now.

>d. What else ?

Reduce your connector count! If at all possible, go with a all in one mother board (video, ide, flop, 550 serial, par and ethernet). Is you need to use external ISA cards, run a bead of RTV (silicone sealer) along seam between the cards PCB and motherboard connector.

You'll need a watchdog circuit also (standard on most PC/104 MB). Disable any checking in the bios on things like keyboard, video etc. Keep a emergency boot disk nearby.

>
>You could get away with something a little cheaper....but I believe the
>target price on a turnkey node (for people who don't want to do it themself
>from scratch) is going to be \$500 or less. Just attach radios.

You can assume that a individual ham's labor is 'free', but who are these people that are going to build/enhance the turnkey node for free? Remember we are talking 'turnkey' which means someone else has to do the labor. At a minimum, your going to have to add in a watchdog (\$30?? or so out the door). Your also going to have to provide some sort of technical support. All the things take time and generally money.

I'd select that all in one 586 board you mentioned above (and ask around at the clone shops to see what its return rate is) coupled with a nice compact desktop case (not a mini-tower). To reduce your labor costs, just include instructions about reversing the fan and installing a filter. Also mention the RTV trick I talked about. You might want to drop one into a environmental chamber to make sure nothing is going to come back and bite you.

Bid around on the various SCC cards, I suspect you'll go with the PI as its list price is the best of the bunch. I'd actually try and integrate both modems on it however (the TI3105 and some sort of FSK 9.6/19.2 unit). I'm hoping that you can put two PI boards in a box so you can also offer a 56kbaud option. The Baycomm folks (or is it Holland?) have a 4 port SCC card that might be useful also. Or you might even relegate any 1200 baud support to the two onboard serial ports.

I did a PCB layout of Tony's Quibrono(sp?) watchdog reset circuit. I will make that available to TAPR if you wish.

>
>The advantages of having a standard bus will be the available options that
>can be added that reduce the overall cost later. Do you want to use
>Pi-Cards, Ethernet cards, etc that many already have and don't need to
>purchase new.
>
>Cheers - Greg

NE2000 is a standard on board option on many motherboards. I realize it is not the fastest, but I think reducing your connector count is well worth it. Your point is well taken on the PI/Baycom/Paccomm SCC boards however.

73

-Jeff wb8wka
Regards,

-Jeff King
Aero Data Systems, Inc.
P.O. Box 9325
Livonia, MI 48151 U.S.A.
V 1-810-471-1787, F 1-810-471-0279

21. Re: [NETSIG:2959] MVS 386EX SBC

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Wed, 6 Nov 1996 16:15:08 -0600
To: netsig@tapr.org
Message-ID: <v03007803aea6b813235a@[208.134.134.42]>
Rendered body type: text/plain

This sounds like an off shot of the Intel Eval board I mentioned, although a little cheaper.

It could even be the one we got from Wyle...maybe John Ackermann can comment since he has it. You can get that board for about \$278 from Wyle.

Yes -- it looks good doesn't it :-)

The ability to have a FlashRom in place to remove any mechanical devices for the system is a real advantage. In addition, these boards are normally designed to run off of +12v. The two elements I have always thought are the necessary items for routers in noncontrolled environmental sites.

Just have to find someone that would want to develop code for something like this. Any takers? That was one reason the level kept popping up to something to handle a Liunx kernal, since code is there and could be made to work very easily.

The only issue you have with the system is easy compatibility to things that require something other than serial/parallel interfaces. While the robust nature of the unit is the plus, expendability at what price for the passive backplane is the down side.

Having an inexpensive router to go along with the high-speed radios that TAPR is going to be doing (and is doing) in the coming years and that others will be doing as well is a key point to success.

Let's get some people together and get some software going!

Greg

>A product from MVS, P.O. Box 850, Merrimack, NH 03054, 508-792-9507 voice,
>508-757-8769 fax has me interested. (Before you ask, no, I don't know if
>they have a Web site or e-mail- none is indicated in their ads).
>
>The product is called 386EX Single Board Computer, P/N MVSEX2. By my

```

>calculations, its cost in 100 piece quantities is $210.00.
>
>The 386EX SBC specs are (very tersely summarized) is that it's PC
>compatible- it will boot and run DOS (and Windows... ). Processor is a 50
>MHz 386EX. It comes with a PC bus connector (as in 8-bit data XT, not
>16-bit data AT), has no onboard video or keyboard ports, but has 5
>8250-equivalent onboard serial ports and two parallel ports. It can be
>plugged into a passive bus and used to build up a full PC (although their
>customers seldom do that). A custom ROM can be burned, and it will boot
>from the ROM. Memory is 128K RAM, 128K Flash Disk, up to 64 MB RAM, 1 MB
>ROM.
>
>This thing seems nearly too good to believe, especially the prices. They
>claim it's fully PC compatible if you need that, or completely
>customizable if you want that. In 1000+ quantities, price can be as low
>as $113!
>
>It would seem to me that NOS could be rewritten to not require DOS
>services, and thus run in this unit as standalone. The only thing that
>concerns me somewhat is the 8250 serial ports, although running at 50 MHz
>and no DOS overhead to contend with, or using, say, a PI card and Ethernet
>card might make that a non-issue.
>
>Anyone have any experience with these units?
>
>Steve N8GNJ
>
>
>---
>Steve Stroh N8GNJ      strohs@halcyon.com      | Amateur Spread Spectrum is
>Amateur Radio TCP/IP n8gnj@sw.n8gnj.ampr.org | the wave of the present!

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Greg Jones, WD5IVD
Austin, Texas
wd5ivd@tapr.org
http://www.tapr.org/~wd5ivd
-----

```

22. TAPR Spread Spectrum STA Granted

```

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Sat, 9 Nov 1996 01:28:37 -0600
To: "TAPR-BB list mailing" <tapr-bb@tapr.org>,
    "Spread Spectrum" <ss@tapr.org>,
    "NETSIG list mailing" <netsig@tapr.org>,
    "AMSAT BB Mail Group" <amsat-bb@amsat.org>,
    "Bill Westradio Pasternak" <billwa6itf@aol.com>,
    "Len KB7LPW Winkler" <lenwink@indirect.com>,
    "Hap KC9RP RAIN Holly" <hholly@ais.net>,
    "Dave Wolf TCET" <wo5h@tapr.org>, "Greg Jones WD5IVD" <wd5ivd@tapr.org>,
    "Rich CQ VHF" <NW2L@aol.com>,
    "Gagne, Jennifer, N1TDY" <jgagne@arrl.org>,
    "Donald Rotolo" <73227.2644@compuserve.com>,
    "Stan Horzepa" <stanzepa@nai.net>,
    "Bob Hansen (TAPR)" <psr@tapr.org>,
    "Paul Rinaldo" <prinaldo@interramp.com>,
    "TAPR SYS" <tapr-sys@tapr.org>
Message-ID: <v03007803aea9dae8aced@208.134.134.42>
Rendered body type: text/plain

```

TAPR's Spread Spectrum Special Temporary Authorization is Granted
November 8th, 1996

The FCC has granted a Special Temporary Authorization (STA) to Greg Jones, WD5IVD, and Dewayne Hendricks, WA8DZP, on behalf of TAPR (Tucson Amateur Packet Radio, Corp), regarding spread spectrum communications. On April 10th, 1996, TAPR requested a waiver of the rules and regulations governing Amateur Radio spread spectrum communications in order to conduct an experimental program to test spread spectrum emissions over amateur radio facilities on different bands.

Full details on the TAPR spread spectrum STA are available on its web page <<http://www.tapr.org>> under the Spread Spectrum area.

A Special Temporary Authorization (STA) is the authority granted to a permittee or licensee to permit the operation of a broadcast facility for a limited period at a specified variance from the terms of the station authorization or requirements of the FCC rules applicable to the particular

class of station.

TAPR recently released a position statement on Spread Spectrum Technology Development which in part states, "TAPR believes that the technical facts support our conviction that conventional and spread spectrum systems can coexist without detriment to conventional systems on all frequencies from MF to EHF. To this end, TAPR will begin to research spread spectrum systems that will develop technology for future deployment."
(<http://www.tapr.org/ss/>)

TAPR plans to continue its leading role in developing standards and technology for spread spectrum communications for the amateur radio community through discussion groups, cooperative efforts and experimental programs such as now being permitted by the recently granted STA. In particular, due to the rapid development of communications hardware and software, TAPR believes that the use of hybrid spread spectrum emissions, as well as spreading codes not envisioned by Section 97.311(d) of the Rules can be employed without causing harmful interference to other amateur radio operators.

TAPR was founded in 1982 as an international organization with interests in the areas of packet and digital communications. Today, TAPR continues as a membership supported nonprofit amateur radio research and development organization, and currently has more than 2,000 members worldwide. TAPR continues to develop kits for the amateur radio community and is working actively on publications and communications standards.

Tucson Amateur Packet Radio
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399 * 817-383-0000

e-mail: TAPR@TAPR.ORG ftp: ftp.tapr.org web: <http://www.tapr.org/>

Greg Jones, WD5IVD
Austin, Texas
wd5ivd@tapr.org
<http://www.tapr.org/~wd5ivd>

23. Re: [NETSIG:2962] TAPR Spread Spectrum STA Granted

From: rmackay@cycor.ca (Ron VE1AIC)
Date: Sat, 9 Nov 1996 11:06:51 -0400
To: netsig@tapr.org
Message-ID: <199611091506.LAA16637@bud.peinet.pe.ca>
Rendered body type: text/plain

>TAPR's Spread Spectrum Special Temporary Authorization is Granted
>November 8th, 1996
>-----
>

>The FCC has granted a Special Temporary Authorization (STA) to Greg Jones,
>WD5IVD, and Dewayne Hendricks, WA8DZP, on behalf of TAPR (Tucson Amateur
>Packet Radio, Corp), regarding spread spectrum communications. On April

Congratulations Greg and TAPR. I'll be looking forward to reports on the SS progress.
- Ron

24. BIT-REGEN RPTR. DESIGN

From: kb8qir@westco.net (Jacob W. Tennant)
Date: Mon, 11 Nov 1996 12:12:07 -0600 (CST)
To: NETSIG@tapr.org
Message-ID: <199611111812.MAA27358@tapr.org>
Rendered body type: text/plain

I AM LOOKING FOR THE CONSTRUCTION PLANS FOR A BIT-REGENERATIVE REPEATER FOR USE ON 9K6 AND 19K2 PACKET NETWORK IN THE MAKING IN MY LOCAL AREA.

ANY AND ALL ADVICE WILL BE GREATLY APPRECIATED.

73'S JAKE

25. Re: [NETSIG:2964] BIT-REGEN RPTR. DESIGN

From: "Karl F. Larsen" <k5di@acca.nmsu.edu>
Date: Mon, 11 Nov 1996 14:46:07 -0700

To: netsig@tapr.org
Message-ID: <199611112146.OAA14458@acca.nmsu.edu>
Rendered body type: text/plain

At 12:20 PM 11/11/96 -0600, you wrote:
> I AM LOOKING FOR THE CONSTRUCTION PLANS FOR A BIT-REGENERATIVE REPEATER
> FOR USE ON 9K6 AND 19K2 PACKET NETWORK IN THE MAKING IN MY LOCAL AREA.
>
> ANY AND ALL ADVICE WILL BE GREATLY APPRECIATED.
>
> 73'S JAKE
>
>

Use the TAPR modem in a tnc-2 tnc with the TAPR bit-regen chip in it. I guess you need 2 of each since you have both a 9600 and twice that channel.

Both are available from TAPR.

73, de Karl aka k5di

Karl F. Larsen Box 74, Mesilla Park, NM 88047 (505) 524-3303
k5di@k5di.cruces.nm.usa.noam k5di@acca.nmsu.edu k5di@juno.com

26. Re: [NETSIG:2964] BIT-REGEN RPTR. DESIGN

From: Bob Nielsen <nielsen@primenet.com>
Date: Mon, 11 Nov 1996 15:49:26 -0700 (MST)
To: "Jacob W. Tennant" <kb8qir@westco.net>
Cc: netsig@tapr.org
Message-ID: <Pine.LNX.3.94.961111154645.223C-100000@nielsen.tus.primenet.com>
Rendered body type: text/plain

On Mon, 11 Nov 1996, Jacob W. Tennant wrote:

> I AM LOOKING FOR THE CONSTRUCTION PLANS FOR A BIT-REGENERATIVE REPEATER
> FOR USE ON 9K6 AND 19K2 PACKET NETWORK IN THE MAKING IN MY LOCAL AREA.
>
> ANY AND ALL ADVICE WILL BE GREATLY APPRECIATED.

The TAPR 9600 bps modem kit has an option of adding a few additional parts to regenerate the bits. It's a \$10 option and a lot easier than doing it some other way. I don't know if anyone has used these modems at 19k2 or how difficult that would be.

Bob

Bob Nielsen Internet: nielsen@primenet.com
Tucson, AZ AMPRnet: w6swe@w6swe.ampr.org
 AX.25: w6swe@wb7t1s.az.usa.noam
 http://www.primenet.com/~nielsen

27. PK96 in diode matrix stack

From: Richard Montgomery <richard@iswt.com>
Date: Wed, 27 Nov 1996 09:40:25 -0600
To: netsig@tapr.org
Message-ID: <329C60E9.50C@iswt.com>
Rendered body type: text/plain

Hello everyone, this is my first post to this list, so here goes. I have just received a PK96 tnc for use as a new 9600 link we are installing. I wanted to know if anyone is using it connected to other tnc2's in a diode matrix, and maybe some insight on any problems or hints about its operation. I have read the X1J docs concerning the modification of pin23 RS232 mode selection signal, and will be doing that shortly, but after that mod (if successful) what was next. If any other mods were needed or just hook it up to the diode matrix and it away it goes.

Thanks in advance,
Richard Montgomery
KB4YTM@KB4YTM.#WESTN.TN.US.NA
richard@iswt.com

28. IS IT ALIVE?

From: Thomas I Mathewson <tommath@norwich.net>
Date: Sun, 01 Dec 1996 01:18:27 -0800
To: netsig@tapr.org
Message-ID: <32A14D63.7E15@norwich.net>

Rendered body type: text/plain

I have not gotten anything from netsig in awhile and was wondering if it was still alive or has it died off?

73 Tom KA2MYD

29. Re: [NETSIG:2968] IS IT ALIVE?

From: David Wolf <wo5h@tapr.org>
Date: Sat, 30 Nov 1996 21:39:37 -0600
To: netsig@tapr.org
Message-ID: <32A0FDF9.2358@tapr.org>
Rendered body type: text/plain

It is alive and well, apparently.

Dave Wolf W05H

30. Re: [NETSIG:2969] Re: IS IT ALIVE?

From: Robert <w5robert@blkbox.COM>
Date: Sat, 30 Nov 1996 22:48:54 -0600 (CST)
To: netsig@tapr.org
Message-ID: <9611302249.aa27665@blkbox.COM>
Rendered body type: text/plain

Too ask a ? and see:

What's are the "turn-key" 9600 or 19200 radio/nodes
that can be setup easy and put on line.

--

73 Robert W5AJ w5robert@blkbox.com

December 1996

Original source file: netsig.9612

Source: http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.9612

1. Re: [NETSIG:2968] IS IT ALIVE?

From: aa7ya@juno.com
Date: Sat, 30 Nov 1996 22:55:02 MST
To: netsig@tapr.org
Message-ID: <19961130.224829.5375.1.aa7ya@juno.com>
Rendered body type: text/plain

On Sat, 30 Nov 1996 19:25:03 -0600 (CST) Thomas I Mathewson
<tommath@norwich.net> writes:

>I have not gotten anything from netsig in awhile and was wondering if
>it was still alive or has it died off?

>
>73 Tom KA2MYD
>
>

To paraphrase Frankenstein....

"She's ALIVE!, She's ALIVE!" - :)

Stacey, AA7YA@AA7YA.#NEMT.USA.NOAM

2. Re: [NETSIG:2968] IS IT ALIVE?

From: Steve Stroh <strohs@halcyon.com>
Date: Sun, 1 Dec 1996 07:48:19 -0800 (PST)
To: TAPR Networking SIG Mailing List <netsig@tapr.org>
Message-ID: <Pine.ULT.3.95.961201070222.17815A-100000@coho.halcyon.com>
Rendered body type: text/plain

On Sat, 30 Nov 1996, Thomas I Mathewson wrote:

> I have not gotten anything from netsig in awhile and was wondering if
> it was still alive or has it died off?
>
> 73 Tom KA2MYD

NetSIG has been a bit quiet. TAPR's energies (including mine) are being directed at getting the Spread Spectrum STA up and running.

There is another project nearly ready for announcement that will involve NetSIG pretty intimately, so stay tuned.

In the meantime...

It's increasingly obvious that inexpensive IP routers will be required for the next generation of Amateur Digital systems. This next generation will typically be low power and quite possibly use different antenna systems than what Amateurs are used to. One likely network architecture will be a "mesh" design that will work best if there are many of the nodes in the network are multi-ported, hence the requirement for an IP router.

There has been some excellent discussion on NetSIG about IP routers. At the moment, planning is proceeding on the assumption that NOS in some form will be used- there were some promising reports about IP routers that have been or could be built from Linux that could fit on a single floppy, but nothing apparently came of those efforts (that I'm aware of).

For home use, the price/performance of an older (386 or better, 4 MB RAM, 100 MB HD) are hard to beat. "Unattended nodes" also need to be considered.

The first option for an IP router is to follow up on discussion about making use of the IP routing built in to the current versions of TheNet X1J, and additional capabilities that may be added such as SLIP or PPP.

Tasks for option 1:

- * Follow up on the discussions on various mailing lists about coming enhancements to the X1J firmware.
- * Document how to use the IP routing features of X1J (something of a black art, if I recall).

The second option is to use PC's. One problem with PC's is that their

power supplies aren't very good at dealing with power glitches. A solution that seems to me is to use a 12V power supply, a Gel Cell type battery, and a small 12V to 120V inverter. The PC plugs into the inverter, and is therefore isolated from any glitches in the 120V line. The other problem with PC's is environmental, which I think can be overcome by encasing the PC into a second (sealed) case (nothing expensive- thin plywood, etc.) with better filters and additional fans to insure adequate cooling and a minimum of contamination being pulled in.

Tasks for option 2:

- * Identify a good, inexpensive 12V to 120V inverter that works well to power PC's.
- * Identify other ways to operate PC's directly from 12V.

The third option is to use "PC-type" embedded processors such as those made by Ampro and other PC/104 manufacturers. They offer reliability and DOS compatibility. They're expensive, but no more so than "inaccessible repeater" grade equipment. They also have the advantage of possibly operating in a sealed case (lower power requirement, no fans/filters). There are also "watchdog timers" offered built in, or easily added to PC/104 systems.

Tasks for option 3:

- * Identify the most cost effective PC/104 vendor offering the parts necessary to build an IP router based on NOS.
- * Spec out the parts necessary to build an IP router from PC/104 components, emphasizing cost effectiveness (mix and match vendors as necessary).

A fourth option is to build a TNC based on the Intel 386EX or the NS486 embedded processors. The 386EX would offer DOS compatibility, but the NS486 would not (no real mode), but have better performance and a "next generation" design than the 386EX. TAPR could offer such a unit as they did with the TNC-1 and TNC-2. This has an additional advantage that the PC architecture is so well understood that the "TNC/386" could be an "engine" for endless variations- repeater controllers, weather nodes, etc.

Tasks for option 4:

- * Spec it, Design it, prototype it. This would be a pretty straightforward design effort for someone familiar with these processors, but TAPR cannot afford to pay professional design fees.
- * Design the firmware, with an emphasis on TAPR retaining the commercial source code rights, but allowing the Amateur community access to the source code as with KA9Q NOS.

A fifth option is to build another TNC based on other embedded processors that would offer a better price/performance than Intel architecture processors.

Tasks for option 5:

- * Same as with option 4.

Suggestions, comments, questions on the above are welcome. Please reply to the list.

If you have specific comments about individuals or groups with the design, integration, or project management skills necessary, please let me know in private e-mail.

Thanks!

Steve Stroh N8GNJ
TAPR NetSIG Chairperson and Mailing List Moderator
strohs@halcyon.com

--

Steve Stroh Woodinville, Washington, USA strohs@halcyon.com

3. Re: 9600/19.2K radios

From: Steve Stroh <strohs@halcyon.com>
Date: Sun, 1 Dec 1996 07:53:11 -0800 (PST)
To: TAPR Networking SIG Mailing List <netsig@tapr.org>
Message-ID: <Pine.Ult.3.95.961201074929.17815B-100000@coho.halcyon.com>
Rendered body type: text/plain

On Sat, 30 Nov 1996, Robert wrote:

> Too ask a ? and see:

> What's are the "turn-key" 9600 or 19200 radio/nodes
> that can be setup easy and put on line.
> --
> 73 Robert W5AJ w5robert@blkbox.com

They're a done deal. UHF only at the moment, 2W or 5W. A 220 version has been rumored. They're made by Tekk and can be purchased from PacComm crystallized for your frequency of choice. 19.2K is a stock 9600 unit with modified filters.

PacComm's web page is at <http://www.paccomm.com>

Steve N8GNJ
NetSIG Chairperson and Mailing List Moderator
n8gnj@tapr.org

4. Re: [NETSIG:2970] Re: IS IT ALIVE?

From: Mel Whitten <mel@mo.net>
Date: Sun, 01 Dec 1996 11:11:49 -0600
To: netsig@tapr.org
Message-ID: <2.2.32.19961201171149.006bb6a4@mo.net>
Rendered body type: text/plain

The MFJ 8621 2m 9K6 radios work OK and are the least cost.
I have used them successfully here in St Louis for over a year.
They are plug and play with TAPR modems, PK96, Kantronics 9612.
I don't recommend using the MFJ in at a high profile node site, obviously.

According to an ARRL review, the AZDEN data radio is one of the better 9K6 ones, but it is \$\$\$.

Also, PacComm has a "Packet Radio" (modem + radio in one enclosure).

BTW, does any know if MFJ has released their 220 version of the data radio?

At 10:57 PM 11/30/96 -0600, you wrote:
> Too ask a ? and see:
> What's are the "turn-key" 9600 or 19200 radio/nodes
> that can be setup easy and put on line.
> --
> 73 Robert W5AJ w5robert@blkbox.com
>
>
>
Mel Whitten, K0PFX

5. Re: [NETSIG:2973] Re: 9600/19.2K radios

From: Ben Sager <bsager@interserf.net>
Date: Sun, 1 Dec 1996 14:36:26 -0500
To: netsig@tapr.org
Message-ID: <199612011936.0AA24631@ns.interserf.net>
Rendered body type: text/plain

At 09:56 12/1/96 -0600, Steve Stroh wrote:

>
> On Sat, 30 Nov 1996, Robert wrote:
>
>> Too ask a ? and see:
>> What's are the "turn-key" 9600 or 19200 radio/nodes
>> that can be setup easy and put on line.
>> --
>> 73 Robert W5AJ w5robert@blkbox.com
>
> They're a done deal. UHF only at the moment, 2W or 5W. A 220 version has
> been rumored. They're made by Tekk and can be purchased from PacComm
> crystallized for your frequency of choice. 19.2K is a stock 9600 unit with
> modified filters.
>
> PacComm's web page is at <http://www.paccomm.com>
>
> Steve N8GNJ
> NetSIG Chairperson and Mailing List Moderator
> n8gnj@tapr.org
>
>
>

Hi Steve
With that paccom address all I get is a big spill about Olympic Network Communications, is there another address for Paccom??? Or another good supplier of 9600+ equipment??

Thanks
Ben

6. Re: [NETSIG:2975] Re: 9600/19.2K radios

From: "Edson W. R. Pereira" <ewp@uranus.healthnet.org>
Date: Sun, 1 Dec 1996 20:08:18 +0000
To: netsig@tapr.org
Message-ID: <Pine.3.89.9612012019.C174-0100000@uranus>
Rendered body type: text/plain

On Sun, 1 Dec 1996, Ben Sager wrote:

```
> At 09:56 12/1/96 -0600, Steve Stroh wrote:
> >
> >On Sat, 30 Nov 1996, Robert wrote:
> >
> >> Too ask a ? and see:
> >> What's are the "turn-key" 9600 or 19200 radio/nodes
> >> that can be setup easy and put on line.
> >> --
> >> 73 Robert W5AJ w5robert@blkbbox.com
> >
> >>They're a done deal. UHF only at the moment, 2W or 5W. A 220 version has
> >>been rumored. They're made by Tekk and can be purchased from PacComm
> >>crystalled for your frequency of choice. 19.2K is a stock 9600 unit with
> >>modified filters.
> >
> >>PacComm's web page is at http://www.paccomm.com
> >
> >>Steve N8GNJ
> >>NetSIG Chairperson and Mailing List Moderator
> >>n8gnj@tapr.org
> >
> >
> >
> >
> Hi Steve
> With that paccom address all I get is a big spill about Olympic Network
> Communications, is there another address for Paccom??? Or another good
> supplier of 9600+ equipment??
>
> Thanks
> Ben
>
```

The address Steve gave is correct. The Paccomm URL is <http://www.paccomm.com>
You may be trying <http://www.pacom.com> which is the wrong URL.

73,

-- Edson, N1VTN

7. Re: [NETSIG:2975] Re: 9600/19.2K radios

From: Glenn Mead <mead@dg-rtp.dg.com>
Date: Sun, 01 Dec 1996 15:34:09 -0500
To: netsig@tapr.org
Message-ID: <2.2.32.19961201203409.006dfd70@128.222.37.1>
Rendered body type: text/plain

Ben, make sure you spelled paccomm right.

```
At 01:40 PM 12/1/96 -0600, you wrote:
>At 09:56 12/1/96 -0600, Steve Stroh wrote:
>>
>>On Sat, 30 Nov 1996, Robert wrote:
>>
>>> Too ask a ? and see:
>>> What's are the "turn-key" 9600 or 19200 radio/nodes
>>> that can be setup easy and put on line.
>>> --
>>> 73 Robert W5AJ w5robert@blkbbox.com
>>
>>>They're a done deal. UHF only at the moment, 2W or 5W. A 220
version has
```

>>been rumored. They're made by Tekk and can be purchased from PacComm
>>crystallized for your frequency of choice. 19.2K is a stock 9600 unit with
>>modified filters.
>>
>>PacComm's web page is at http://www.paccomm.com
>>
>>Steve N8GNJ
>>NetSIG Chairperson and Mailing List Moderator
>>n8gnj@tapr.org
>>
>>
>>
>
>Hi Steve
>With that paccomm address all I get is a big spill about Olympic Network
>Communications, is there another address for Paccomm??? Or another good
>supplier of 9600+ equipment??
>
>Thanks
>Ben
>
>
>

```

-----
| Glenn Mead      | KE4ZEA      | Without challenge |
| Data General   | e-mail mead@dg.com | there is no chance |
| 62 Alexander Dr | voice 919/248-6029 | to excel.          |
| RTP, NC 27709  | fax 919/248-6108  |                    |
|-----|
| packet KE4ZEA@WR4AGC.#DUR.NC.USA.NOAM |
|-----|

```

8. Re: [NETSIG:2972] Re: Power Supplies

From: "Steve Sampson" <ssampson@oklahoma.net>
Date: Sun, 1 Dec 1996 14:42:26 -0600
To: <netsig@tapr.org>
Message-ID: <199612012048.0AA07289@dns.okc>
Rendered body type: text/plain

If you get rid of the Floppy and Hard drive, I think you can safely get away with a 5 Volt only design. I'm not sure, but I don't think there is much +/- 12 Volt requirements for mother boards anymore.

But say you do keep the floppy (just put it in the sealed box as well), you could probably just feed the whole thing with 13.8 VDC and use a couple of Zeners, and a 5 Volt regulator. Make it plug into the Solar or Wind Power buss :-)

```

-----
>
> The second option is to use PC's. One problem with PC's is that their
> power supplies aren't very good at dealing with power glitches. A
> solution that seems to make sense to me is to use a 12V power supply, a
> Gel Cell type battery, and a small 12V to 120V inverter. The PC plugs
> into the inverter, and is therefore isolated from any glitches in the
120V
> line.

```

9. Re: [NETSIG:2975] Re: 9600/19.2K radios

From: "Steve Sampson" <ssampson@oklahoma.net>
Date: Sun, 1 Dec 1996 14:56:11 -0600
To: <netsig@tapr.org>, <bsager@interserf.net>
Message-ID: <199612012102.PAA08076@dns.okc>
Rendered body type: text/plain

Ben Sager <bsager@interserf.net> reports:

> With that paccomm address all I get is a big spill about Olympic Network
> Communications, is there another address for Paccomm???

Ben,

It's not:

p a c c o m

it is:

p a c c o m m

Notice the two (2) english "C"'s and the two (2) english "M"'s in the name.
Now, what you do is put all that into a URL:

<http://www.paccomm.com/>

Here, let me magnify that for you:

H T T P : / / W W W . P A C C O M M . C O M /

Hope this helps,

H O P E T H I S H E L P S

Steve

10. Re: [NETSIG:2978] Re: Power Supplies

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Sun, 1 Dec 1996 16:06:31 -0600
To: netsig@tapr.org
Message-ID: <v03007806aec7b0a2711a@[129.120.111.42]>
Rendered body type: text/plain

Someone suggested to me the other day an interesting concept regarding current power supplies. With the cost of the switching supplies being so cheap -- why not just design up a sensor board that control 2 supplies. When the primary supply falls out of some range of operations, you cut power to it and switch to the secondary. A MetCon-1 (or future MetCon-2) or something like that could do it simply enough or some special interface might be done to reduce the cost.

Just use the standard P1/P2 interface to the motherboard, some simple relay method to isolate the two supplies from each other so that only one is providing power, and have some type of high-voltage relay handling the 110v to the power supplies.

That is if current supplies are an issue at sites.

One possibility.

Cheers -- Greg

>If you get rid of the Floppy and Hard drive, I think you can safely
>get away with a 5 Volt only design. I'm not sure, but I don't think
>there is much +/- 12 Volt requirements for mother boards anymore.
>
>But say you do keep the floppy (just put it in the sealed box as well),
>you could probably just feed the whole thing with 13.8 VDC and use
>a couple of Zeners, and a 5 Volt regulator. Make it plug into the Solar
>or Wind Power buss :-)
>
>
>-----
>>
>> The second option is to use PC's. One problem with PC's is that their
>> power supplies aren't very good at dealing with power glitches. A
>> solution that seems to make sense to me is to use a 12V power supply, a
>> Gel Cell type battery, and a small 12V to 120V inverter. The PC plugs
>> into the inverter, and is therefore isolated from any glitches in the
>120V
>> line.

Greg Jones, WD5IVD
Austin, Texas
wd5ivd@tapr.org
<http://www.tapr.org/~wd5ivd>

11. Re: [NETSIG:2970] Re: IS IT ALIVE?

From: Sid Ashen-Brenner <sashen@midusa.net>
Date: Sun, 01 Dec 1996 16:46:25 -0600
To: netsig@tapr.org
Message-ID: <2.2.32.19961201224625.006872e8@midusa.net>
Rendered body type: text/plain

At 10:57 PM 11/30/96 -0600, you wrote:
>Too ask a ? and see:
>What's are the "turn-key" 9600 or 19200 radio/nodes
>that can be setup easy and put on line.
>--
>73 Robert W5AJ w5robert@blkbox.com

The TEKK (KS-960)radio and the PacComm Spirit 2 TNC work very well together here on 9600.

Sid Ashen-Brenner n0obm Salina, Ks.
Sid Ashen-Brenner Salina, Kansas
Internet : sashen@midusa.net
AX-25 : n0obm @ n0obm.#ncks.ks.usa.noam

12. MFJ's on 9600 (?)

From: Mike Fahmie <MPFahmie@lbl.gov>
Date: Sun, 01 Dec 1996 14:49:02 -0800
To: netsig@tapr.org
Message-ID: <199612012249.0AA13182@mh1.lbl.gov>
Rendered body type: text/plain

>From time to time I hear comments that MFJ tnc's shouldn't be used at 9600, but I've never known why, or even if the advice was valid.

Currently, I'm helping a friend make his MFJ1270c + paccomm 9600 modem work. It connects, but seems to have trouble moving data efficiently, I'm not blaming the MFJ at this point, there could be any number of reasons why its not performing as I expect, but I'd like to know if that tnc is a common cause. It is running TheNet 2.12 I believe.

If, in fact, MFJ's are not suited for 9600, I'd like to know why. Has anyone really isolated a 9600 problem to their tnc?

Tnx,
Mike

Mike Fahmie - Advanced Light Source
Lawrence Berkeley National Laboratory
(510) 486-4030 - MPFahmie@lbl.gov
WA6ZTY @ N6EEG

13. Re: [NETSIG:2978] Re: Power Supplies

From: Mike Fahmie <MPFahmie@lbl.gov>
Date: Sun, 01 Dec 1996 14:53:41 -0800
To: netsig@tapr.org
Message-ID: <199612012253.0AA13331@mh1.lbl.gov>
Rendered body type: text/plain

At 02:47 PM 12/1/96 -0600, you wrote:

>>
>> The second option is to use PC's. One problem with PC's is that their
>> power supplies aren't very good at dealing with power glitches. A
>> solution that seems to make sense to me is to use a 12V power supply, a
>> Gel Cell type battery, and a small 12V to 120V inverter. The PC plugs
>> into the inverter, and is therefore isolated from any glitches in the
>120V
>> line.
>

Some years ago, I saw a PC powersupply (in a catalog) that ran from 12vdc. It was built to fit inside of a PC in place of the typical AC powered unit. I've been watching catalogs ever since hoping to see it again without success.

Does anyone know of such supplies currently on the market?

-Mike-

Mike Fahmie - Advanced Light Source
Lawrence Berkeley National Laboratory
(510) 486-4030 - MPFahmie@lbl.gov

14. TheNET X1J progress report/rumor denial

From: burt lang <burt@roccler.qc.ca>
 Date: Sun, 01 Dec 1996 17:32:18 +0000
 To: netsig@tapr.org
 Cc: tadd@jlc.net, russet@usa1.com,
 "Mike Staines, WA1PTC" <mike@nh.ultranet.com>,
 lcollins@lcollins.mv.com, "Jim Wzorek, K1MEA" <jfw@crockier.com>,
 "Dana Jonas, WA2WNI" <dana_jonas@juno.com>,
 "Cal Stiles, W1JFP" <cals@sover.net>,
 "Don Rotolo, N2IRZ/ANS - home" <73227.2644@CompuServe.COM>,
 w6go@netcom.com

Message-ID: <32A1C122.47D5@roccler.qc.ca>

Rendered body type: text/plain

Hi Folks

A couple of weeks ago a rumor surfaced here in the northeast that Dave, G8KBB (the TheNET X1J author), had given up further work on the X1 code and had released the source code for others to work on. It is NOT true. I talked to Dave by phone this afternoon, and it was news to him. He has not given up working on the X1J code and is not thinking about giving up anytime soon. At this time he has just changed employers and does not have much time on his hands with travel and getting acclimatized to the new job so work on amateur projects is slow.

One of the added features that Dave is working on is the implimentation of a SLIP port into the X1J IP switch part of the code. This should interest some as I just read a netsig posting that mentioned that very subject. He is also trying to remove the couple of known bugs in the X1JR4 code, namely the IP table bug (that was easy he said) and the HOSTAlias bug which he has not yet found the cause of. Another item mentioned was additional statistics.

Dave did mention that he was currently working on the PK96 version of the code. I brought him up to date with the AEA situation as I knew it and this was totally new to him (he had been on the road for the last 3 weeks and did not have time to read any amateur news). As a result of this news he quickly added that he would drop further work on that version and switch efforts to other parts of the code. I mentioned that if he was looking for other versions to work on that a Kantronics version would be welcomed in many quarters. He indicated that the PK-96 version did have a very serious bug that would have limited its usefulness anyway and he doubted that anyone had in fact used it yet.

Finally on behalf of all those on this side of the pond that are using the X1 code, I thanked Dave for all the efforts he had put into it to date and wished him good luck in further enhancements.

Burt VE2BMQ

Tech Chairman (still) of NEDA (NorthEast Digital Assoc).

15. Re: [NETSIG:2974] Re: IS IT ALIVE?

From: Carl Estey <cestey@millcomm.com>
 Date: Sun, 1 Dec 96 17:36 CST
 To: netsig@tapr.org
 Message-ID: <m0vULQq-000MdEC@mill2.millcomm.com>
 Rendered body type: text/plain

At 11:13 AM 12/1/96 -0600, you wrote:

>

>The MFJ 8621 2m 9K6 radios work OK and are the least cost.

>I have used them successfully here in St Louis for over a year.

Mel -

I have had trouble getting one to work. First it had 9 uv sensitivity and then after factory return 4uv. Now, after another trip to MFJ, it is a bit better than 1 uv. Did you have to do anything to get "OK" performance?

73

Carl WA0CQG

16. Re: [NETSIG:2982] MFJ's on 9600 (?)

From: Bob Nielsen <nielsen@primenet.com>
Date: Sun, 1 Dec 1996 17:37:48 -0700 (MST)
To: Mike Fahmie <MPFahmie@lbl.gov>
Cc: netsig@tapr.org
Message-ID: <Pine.LNX.3.94.961201173216.10490B-100000@nielsen.tus.primenet.com>
Rendered body type: text/plain

On Sun, 1 Dec 1996, Mike Fahmie wrote:

>
> >From time to time I hear comments that MFJ tnc's shouldn't be used at 9600,
> but I've never known why, or even if the advice was valid.
>
> Currently, I'm helping a friend make his MFJ1270c + paccomm 9600 modem work.
> It connects, but seems to have trouble moving data efficiently, I'm not
> blaming the MFJ at this point, there could be any number of reasons why its
> not performing as I expect, but I'd like to know if that tnc is a common
> cause. It is running TheNet 2.12 I believe.
>
> If, in fact, MFJ's are not suited for 9600, I'd like to know why. Has
> anyone really isolated a 9600 problem to their tnc?
>

Mike, the most likely problem is that the LM324 (or equiv.) op-amp used to drive the serial port may not be fast enough to handle 9600 baud. Many MFJ (or other TNC-2 clones) will handle this, but many will not. This is not really a MFJ problem, but an artifact of the design (remember that the TNC-2 is not exactly state of the art in 1996.) Try a TL084 or TL094. They should work better. I think this showed up in PSR several years ago.

73, Bob

Bob Nielsen Internet: nielsen@primenet.com
Tucson, AZ AMPRnet: w6swe@w6swe.ampr.org
 AX.25: w6swe@wb7t1s.az.usa.noam
 http://www.primenet.com/~nielsen

17. I NEED UNSUBSCRIBED!

From: "Tim M. Tracy" <tmt@bright.net>
Date: Sun, 01 Dec 1996 19:39:04 -0500
To: netsig@tapr.org
Message-ID: <32A22528.2792@bright.net>
Rendered body type: text/plain

HELP!

How Do I unsubscribe?
--

Tim M. Tracy
tmt@bright.net

18. Re: [NETSIG:2985] Re: IS IT ALIVE?

From: Mel Whitten <mel@mo.net>
Date: Sun, 01 Dec 1996 20:09:11 -0600
To: netsig@tapr.org
Message-ID: <2.2.32.19961202020911.00696efc@mo.net>
Rendered body type: text/plain

Carl,

I am not sure if any of the MFJ8621s ever had .5uV (well, maybe one did). I have heard this complaint from other users, believe it was in a review also. However, I found the two I have (on an IFR1200 and a Helper Instruments Sinadder Linear 5) are just under 1uV. Yes, "OK" performance is a bit relative, but given the cost, I felt I was justified by saying it. We have a very high profile 2m 9K6 mode which certainly helps the MFJs "performance". But, in answer to your question, no I did not make any mods, just tweaked them. I was able to receive a schematic from MFJ.

At 05:40 PM 12/1/96 -0600, you wrote:
>At 11:13 AM 12/1/96 -0600, you wrote:
>>
>>The MFJ 8621 2m 9K6 radios work OK and are the least cost.

>>I have used them successfully here in St Louis for over a year.
>
>
>Mel -
>
>I have had trouble getting one to work. First it had 9 uv sensitivity and
>then after factory return 4uv. Now, after another trip to MFJ, it is a bit
>better than 1 uv. Did you have to do anything to get "OK" performance?
>
>73
>Carl WA0CQG
>
>
>
>
Mel Whitten, K0PFX

19. Re: [NETSIG:2986] Re: MFJ's on 9600 (?)

From: "Karl F. Larsen" <k5di@acca.nmsu.edu>
Date: Mon, 2 Dec 1996 06:00:22 -0700 (MST)
To: netsig@tapr.org
Message-ID: <199612021300.GAA18732@acca.nmsu.edu>
Rendered body type: text/plain

At 06:40 PM 12/1/96 -0600, you wrote:
>On Sun, 1 Dec 1996, Mike Fahmie wrote:
>
>>
>> >From time to time I hear comments that MFJ tnc's shouldn't be used at 9600,
>> but I've never known why, or even if the advice was valid.
>>
>> If, in fact, MFJ's are not suited for 9600, I'd like to know why. Has
>> anyone really isolated a 9600 problem to their tnc?
>>
>
>Mike, the most likely problem is that the LM324 (or equiv.) op-amp used to
>drive the serial port may not be fast enough to handle 9600 baud. Many
>MFJ (or other TNC-2 clones) will handle this, but many will not. This is
>not really a MFJ problem, but an artifact of the design (remember that the
>TNC-2 is not exactly state of the art in 1996.) Try a TL084 or TL094.
>They should work better. I think this showed up in PSR several years ago.
>
>73, Bob
>
>-----
>Bob Nielsen Internet: nielsen@primenet.com
>Tucson, AZ AMPRnet: w6swe@w6swe.ampr.org
> AX.25: w6swe@wb7tls.az.usa.noam
> http://www.primenet.com/~nielsen
>
Another way that I used is the Pac Comm speedup kit available last
year for \$25 that includes a faster cpu and crystal and other chips like a
TL094 that get the data
out the rs-232 port fast on a MFJ tnc, which is exactly a tnc-2 design of 10
years ago. Still a good design with some speedup used.

73, de Karl aka k5di

Karl F. Larsen Box 74, Mesilla Park, NM 88047 (505) 524-3303
k5di@k5di.cruces.nm.usa.noam k5di@acca.nmsu.edu k5di@juno.com

20. Re: [NETSIG:2977] Re: 9600/19.2K radios

From: Ben Sager <bsager@interserf.net>
Date: Mon, 2 Dec 1996 08:12:13 -0500
To: netsig@tapr.org
Message-ID: <199612021312.IAA21466@ns.interserf.net>
Rendered body type: text/plain

Thanks Glenn, I don't know why I didn't see that...

73
Ben

At 14:38 12/1/96 -0600, Glenn Mead wrote:
>Ben, make sure you spelled paccomm right.
>
>At 01:40 PM 12/1/96 -0600, you wrote:
>>At 09:56 12/1/96 -0600, Steve Stroh wrote:


```

>>>
>>>On Sat, 30 Nov 1996, Robert wrote:
>>>
>>>> Too ask a ? and see:
>>>> What's are the "turn-key" 9600 or 19200 radio/nodes
>>>> that can be setup easy and put on line.
>>>> --
>>>> 73 Robert W5AJ w5robert@blkbox.com
>>>
>>>They're a done deal. UHF only at the moment, 2W or 5W. A 220
>version has
>>>been rumored. They're made by Tekk and can be purchased from
>PacComm
>>>crystalled for your frequency of choice. 19.2K is a stock 9600
>unit with
>>>modified filters.
>>>
>>>PacComm's web page is at http://www.paccomm.com
>>>
>>>Steve N8GNJ
>>>NetSIG Chairperson and Mailing List Moderator
>>>n8gnj@tapr.org
>>>
>>>
>>>
>>Hi Steve
>>With that paccom address all I get is a big spill about Olympic
>Network
>>Communications, is there another address for Paccom??? Or
>another good
>>supplier of 9600+ equipment??
>>
>>Thanks
>>Ben
>>
>>
>>
>
>-----
>| Glenn Mead      | KE4ZEA          | Without challenge |
>| Data General    | e-mail mead@dg.com | there is no chance |
>| 62 Alexander Dr | voice 919/248-6029 | to excel.         |
>| RTP, NC 27709   | fax 919/248-6108  |                    |
>|-----|
>| packet KE4ZEA@WR4AGC.#DUR.NC.USA.NOAM |
>|-----|
>
>
>
>
>

```

21. Re: [NETSIG:2979] Re: 9600/19.2K radios

From: Ben Sager <bsager@interserf.net>
 Date: Mon, 2 Dec 1996 08:12:15 -0500
 To: netsig@tapr.org
 Message-ID: <199612021312.IAA21471@ns.interserf.net>
 Rendered body type: text/plain

Steve,

If that was your attempt at humor I suggest you keep your day job.
 BUT you did provide a great example of what a Moderator is NOT to do!

Ben

At 15:02 12/1/96 -0600, Steve Sampson wrote:

```

>
>
>-----
>Ben Sager <bsager@interserf.net> reports:
>
>> With that paccom address all I get is a big spill about Olympic Network
>> Communications, is there another address for Paccom???
>
>Ben,
>

```

```

>It's not:
>
>p a c c o m
>
>it is:
>
>p a c c o m m
>
>Notice the two (2) english "C"'s and the two (2) english "M"'s in the
>name.
>Now, what you do is put all that into a URL:
>
>http://www.paccomm.com/
>
>Here, let me magnify that for you:
>
>H T T P : / / W W W . P A C C O M M . C O M /
>
>Hope this helps,
>
>H O P E T H I S H E L P S
>
>Steve
>
>
>

```

22. Re: [NETSIG:2979] Re: 9600/19.2K radios

From: Ben Sager <bsager@interserf.net>
 Date: Mon, 2 Dec 1996 09:08:59 -0500
 To: netsig@tapr.org
 Message-ID: <199612021408.JAA23702@ns.interserf.net>
 Rendered body type: text/plain

Steve Stroh, I apologize to you & the SIG for confusing Steve Samspon as the Moderator.

This long weekend has taught me not to respond to anything, read everything at least twice and then do it next week.

Regards
 Ben

At 15:02 12/1/96 -0600, Steve Sampson wrote:

```

>
>
>-----
>Ben Sager <bsager@interserf.net> reports:
>
>> With that paccom address all I get is a big spill about Olympic Network
>> Communications, is there another address for Paccom???
>
>Ben,
>
>It's not:
>
>p a c c o m
>
>it is:
>
>p a c c o m m
>
>Notice the two (2) english "C"'s and the two (2) english "M"'s in the
>name.
>Now, what you do is put all that into a URL:
>
>http://www.paccomm.com/
>
>Here, let me magnify that for you:
>
>H T T P : / / W W W . P A C C O M M . C O M /
>
>Hope this helps,
>
>H O P E T H I S H E L P S
>
>Steve

```

>
>
>

23. Re: [NETSIG:2991] Re: 9600/19.2K radios

From: Steve Sampson <ssampson@claven.tinker.af.mil>
Date: Mon, 02 Dec 1996 08:14:14 -0600
To: netsig@tapr.org
Message-ID: <32A2E436.41C6@eds.tinker.af.mil>
Rendered body type: text/plain

Ben Sager wrote:

>
> Steve,
>
> If that was your attempt at humor I suggest you keep your day job.
> BUT you did provide a great example of what a Moderator is NOT to do!
>
> Ben

I'm not the moderator.

I don't know, I guess I'm a little more curious than most. When I have a problem I try to figure it out for myself, rather than asking for help right off the bat. Later when I give up, I ask. But normally this is more than one try.

Steve

24. Re: [NETSIG:2975] Re: 9600/19.2K radios

From: Steve Stroh <strohs@halcyon.com>
Date: Mon, 2 Dec 1996 10:04:52 -0800 (PST)
To: netsig@tapr.org
Message-ID: <Pine.ULT.3.95.961202095944.10123B-100000@chinook.halcyon.com>
Rendered body type: text/plain

On Sun, 1 Dec 1996, Ben Sager wrote:

> Or another good supplier of 9600+ equipment??

Ben:

Check out <http://hydra.carleton.ca/articles/hispeed.html>

VE3JF has done a great job of putting together options for Medium Speed (loosely defined as 9.6 - 56 Kbps) Amateur Radio networking.

Steve Stroh N8GNJ
NetSIG Chairperson and Mailing List Moderator
n8gnj@tapr.org

--

Steve Stroh Woodinville, Washington, USA strohs@halcyon.com

25. RE: [NETSIG:2970] Re: IS IT ALIVE?

From: Gwyn Reedy <gwyn@paccomm.com>
Date: Mon, 2 Dec 1996 15:48:59 -0500
To: "'netsig@tapr.org'" <netsig@tapr.org>
Message-ID: <01BBE068.570E5BC0@gwyn.paccomm.com>
Rendered body type: text/plain

On Saturday, November 30, 1996 5:57 PM, Robert[SMTP:w5robert@blkbox.com] wrote:

>Too ask a ? and see:
>
>What's are the "turn-key" 9600 or 19200 radio/nodes
>that can be setup easy and put on line.
>--
>73 Robert W5AJ w5robert@blkbox.com

Thanks for the inquiry. We have been making a product since 1991 called the IPR for Integrated Packet Radio. The IPR uses a TNC-NB96 and a TEKK radio all in one case. It is available for either 9600 or 19200 bps.

9600 = \$499
19,200 = \$550

end

I beg the group's pardon - the reply-to gremlin got me and a private sales message went to the SIG.

At 12:07 12/2/96 -0600, Steve Stroh wrote:
>

>On Sun, 1 Dec 1996, Ben Sager wrote:
>
>> Or another good supplier of 9600+ equipment??
>
>Ben:
>
>Check out <http://hydra.carleton.ca/articles/hispeed.html>
>
>VE3JF has done a great job of putting together options for Medium Speed
>(loosely defined as 9.6 - 56 Kbps) Amateur Radio networking.
>
>
>Steve Stroh N8GNJ
>NetSIG Chairperson and Mailing List Moderator
>n8gnj@tapr.org
>
>
>--
>Steve Stroh Woodinville, Washington, USA strohs@halcyon.com
>
>
>

28. Re: 9600 backbone radios

From: Steve Stroh <strohs@halcyon.com>
Date: Mon, 2 Dec 1996 15:47:18 -0800 (PST)
To: TAPR Networking SIG Mailing List <netsig@tapr.org>
Message-ID: <Pine.ULT.3.95.961202144658.23981B-100000@chinook.halcyon.com>
Rendered body type: text/plain

On Mon, 2 Dec 1996, Ben Sager wrote (in private e-mail to N8GNJ, replied to in NetSIG with his permission):

> We are attempting to put together a 9600 or above
> backbone network in VA for ARES/RACES operations & I've been asked to
> prepare a report on what we should use... So any suggestions will be
> appreciated..

Ben:

Backbone radios imply (to me, at least) that they may well be located on remote sites, and thus need to be able to handle high RF, Intermod, temperature swings, etc. For that reason, the preferred solution usually ends up being a converted commercial Land Mobile radio.

Nearly ANY commercial 2 way mobile radio >CAN BE< made to work at 9600. 19.2K is a bit trickier, but usually doable.

Note >CAN BE<. Some are easier to modify and/or work better than others.

Of all the Land Mobile radios I'm aware of, the one that seems to be the biggest favorite for 9600 / 19.2K conversion is the Motorola Mitrek series. They're reasonably available, reasonably priced, relatively easy to modify, perform well after modification, and reliable.

They can be obtained from CW Wolfe Communications in Billings, Montana and surely from other dealers of surplus Land Mobile radios.

There are instructions posted on the Web (pointers, anyone?) for converting Mitreks to 9600 and 19.2K. TAPR is working on a book that documents various Land Mobile radio conversions to 9600.

If you want plug and play 9600, and expense isn't a major issue, you might want to investigate the Azden PCS9600D. It is synthesized UHF, can handle 19.2K out of box, and approximately 35W output. I haven't heard good reports about any other off the shelf Amateur radio that claims to be able to do 9600 except some VHF/UHF all-mode radios intended for Amateur Satellite use.

A group in Dayton, OH had good results with the Kantronics D-410 radio (apparently discontinued).

As has been mentioned previously, the Tekk and MFJ data radios are not good candidates for backbone use. They're just not built for that kind of activity.

Steve Stroh N8GNJ
NetSIG Chairperson and Mailing List Moderator
n8gnj@tapr.org

29. PLEASE I NEED UNSUBSCRIBED!

From: "Tim M. Tracy" <tmt@bright.net>
Date: Mon, 02 Dec 1996 21:08:52 -0500
To: netsig@tapr.org
Message-ID: <32A38BB4.1FA8@bright.net>
Rendered body type: text/plain

Can someone send personal EMAIL to me telling me how to unsubscribe from this ListServ?

Thanks in Advance!

Tim M. Tracy
tmt@bright.net

30. RE: [NETSIG:2998] Re: 9600 backbone radios

From: rwhart@ix.netcom.com
Date: Mon, 2 Dec 96 21:52:04 est
To: netsig@tapr.org
Message-ID: <Chameleon.849581687.rwhart@pc.wa3mez.netcom.com>
Rendered body type: text/plain

I have a 100 watt Mitrek that I would like to use on 2mtrs. Would appreciate any pointers on what is required to do conversion.

Name: Roderick W. Hart
E-mail: rwhart@ix.netcom.com
Amateur Radio Station WA3MEZ
US ARMY MARS Station AAR3DQ
Date: 12/2/96
Time: 9:52:04 PM

31. PC Power supplies

From: dave land <daveland@pcok.com>
Date: Mon, 02 Dec 1996 21:43:18 +0600
To: netsig@tapr.org
Message-ID: <32A2F916.1A4E@pcok.com>
Rendered body type: text/plain

Somebody was looking for 12 VDC input PC power supplies the other day. I found them in a catalog today but I don't think you really want one when you see the price. CyberResearch (800-341-2525) has a 160W model, 12 VDC @ 25 amps in, standard PC outputs, \$395!!!! Ouch!
73, Dave
--

* David Land Amateur Radio Station: KD5FX *
* Email (home) daveland@pcok.com *
* Email (work) david.r.land@conoco.dupont.com *

32. Re: [NETSIG:3001] PC Power supplies

From: Steve Stroh <strohs@halcyon.com>
Date: Mon, 2 Dec 1996 21:32:10 -0800 (PST)
To: netsig@tapr.org
Message-ID: <Pine.ULT.3.95.961202212731.16300B-100000@chinook.halcyon.com>
Rendered body type: text/plain

On Mon, 2 Dec 1996, dave land wrote:

> Somebody was looking for 12 VDC input PC power supplies the other day. I
> found them in a catalog today but I don't think you really want one when
> you see the price. CyberResearch (800-341-2525) has a 160W model, 12 VDC
> @ 25 amps in, standard PC outputs, \$395!!!! Ouch!
> 73, Dave

Dave:

Thanks for running that down. It's an obvious need and it doesn't surprise me that SOMEONE is filling it.

The price doesn't bother me nearly so much as the 25A@12V input! Yeouch! That sounds like an inefficient linear supply rather than a switcher to me. As inefficient as it seems, it still seems that price performance favors using a 12V to 120V inverter in front of a regular PC power supply for running a regular PC on 12V.

I'll presume they have a Web site and go hunting tomorrow at work on the fast Web Browser.

Steve N8GNJ

--

Steve Stroh Woodinville, Washington, USA strohs@halcyon.com

33. Re: [NETSIG:3002] Re: PC Power supplies

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Tue, 3 Dec 1996 00:55:40 -0600
To: netsig@tapr.org
Message-ID: <v0300782aec97f0a32fe@[129.120.111.42]>
Rendered body type: text/plain

Well -- price performance might be just replacing out \$25 current switching power supplies at site that have 110v.

You want these more expensive supplies at sites that are not easily reached.....I know a few of those. Then on the other hand lots of the sites I work on are easy access. So changing out a supply when it fails would not be a real issue. The damage that it causes to the system is more a worry.

Greg

>On Mon, 2 Dec 1996, dave land wrote:

>

>> Somebody was looking for 12 VDC input PC power supplies the other day. I
>> found them in a catalog today but I don't think you really want one when
>> you see the price. CyberResearch (800-341-2525) has a 160W model, 12 VDC
>> @ 25 amps in, standard PC outputs, \$395!!!! Ouch!

>> 73, Dave

>

>Dave:

>

>Thanks for running that down. It's an obvious need and it doesn't
>surprise me that SOMEONE is filling it.

>

>The price doesn't bother me nearly so much as the 25A@12V input! Yeouch!
>That sounds like an inefficient linear supply rather than a switcher to
>me. As inefficient as it seems, it still seems that price performance
>favors using a 12V to 120V inverter in front of a regular PC power supply
>for running a regular PC on 12V.

>

>I'll presume they have a Web site and go hunting tomorrow at work on the
>fast Web Browser.

>

>Steve N8GNJ

>

>--

>Steve Stroh Woodinville, Washington, USA strohs@halcyon.com

Greg Jones, WD5IVD
Austin, Texas
wd5ivd@tapr.org
<http://www.tapr.org/~wd5ivd>

34. Re: [NETSIG:3002] Re: PC Power supplies

From: ssampson@othello.tinker.af.mil (Steve Sampson)
Date: Tue, 3 Dec 1996 01:12:39 -0600 (CST)
To: netsig@tapr.org
Message-ID: <9612030712.AA03630@othello.tinker.af.mil>
Rendered body type: text/plain

> As inefficient as it seems, it still seems that price performance
> favors using a 12V to 120V inverter in front of a regular PC power supply
> for running a regular PC on 12V.

My 87 Buick Riviera had an Inverter built-in. It was under the armrest and used to power a PC type computer which ran the CRT and touch panel. I'd say these would be available at junk yards, but that model only sold poorly.

Not to say that Inverters aren't easily available elsewhere, just to mention they work well with a PC in a harsh outdoor climate, but you

shouldn't expect more than 98,000 miles use :-)

Steve

35. Re: [NETSIG:2998] Re: 9600 backbone radios

From: Ben Sager <bsager@interserf.net>
Date: Tue, 3 Dec 1996 03:58:20 -0500
To: netsig@tapr.org, netsig@tapr.org
Message-ID: <199612030858.DAA05997@ns.interserf.net>
Rendered body type: text/plain

Very good Steve,

Just what I was looking for..

Thanks
Ben

At 17:50 12/2/96 -0600, Steve Stroh wrote:

>
>On Mon, 2 Dec 1996, Ben Sager wrote (in private e-mail to N8GNJ, replied
>to in NetSIG with his permission):
>
>> We are attempting to put together a 9600 or above
>> backbone network in VA for ARES/RACES operations & I've been asked to
>> prepare a report on what we should use... So any suggestions will be
>> appreciated..
>
>Ben:
>
>Backbone radios imply (to me, at least) that they may well be located on
>remote sites, and thus need to be able to handle high RF, Intermod,
>temperature swings, etc. For that reason, the preferred solution usually
>ends up being a converted commercial Land Mobile radio.
>
>Nearly ANY commercial 2 way mobile radio >CAN BE< made to work at 9600.
>19.2K is a bit trickier, but usually doable.
>
>Note >CAN BE<. Some are easier to modify and/or work better than others.
>
>Of all the Land Mobile radios I'm aware of, the one that seems to be the
>biggest favorite for 9600 / 19.2K conversion is the Motorola Mitrek
>series. They're reasonably available, reasonably priced, relatively easy
>to modify, perform well after modification, and reliable.
>
>They can be obtained from CW Wolfe Communications in Billings, Montana and
>surely from other dealers of surplus Land Mobile radios.
>
>There are instructions posted on the Web (pointers, anyone?) for
>converting Mitreks to 9600 and 19.2K. TAPR is working on a book that
>documents various Land Mobile radio conversions to 9600.
>
>If you want plug and play 9600, and expense isn't a major issue, you might
>want to investigate the Azden PCS9600D. It is synthesized UHF, can
>handle 19.2K out of box, and approximately 35W output. I haven't heard
>good reports about any other off the shelf Amateur radio that claims to be
>able to do 9600 except some VHF/UHF all-mode radios intended for Amateur
>Satellite use.
>
>A group in Dayton, OH had good results with the Kantronics D-410 radio
>(apparently discontinued).
>
>As has been mentioned previously, the Tekk and MFJ data radios are not
>good candidates for backbone use. They're just not built for that kind of
>activity.
>
>Steve Stroh N8GNJ
>NetSIG Chairperson and Mailing List Moderator
>n8gnj@tapr.org
>
>
>

36. W5YI Report on TAPR SS STA

From: Dewayne Hendricks <dewayne@warpspeed.com>
Date: Tue, 3 Dec 1996 08:29:13 -0800
To: ss@tapr.org, fccreg@tapr.org, netsig@tapr.org
Message-ID: <v03010939aeca04eb73ee@[204.118.182.22]>
Rendered body type: text/plain

The latest edition of the "W5YI Report", Vol. 18, Issue 23 has a special report on the TAPR SS STA and Lyle Johnson's keynote talk at this year's ARRL/TAPR DCC.

Check it out!! More info on the "W5YI Report " can be found at:
<<http://www.w5yi.org/>>.

-- Dewayne

--

~~~~~  
Dewayne Hendricks, WA8DZP ! AOL: HENDRICKS  
Warp Speed Imagineering ! Internet: dewayne@warpspeed.com  
43730 Vista Del Mar ! Packet Radio: WA8DZP @ K3MC.#NOCAL.CA.USA.NOAM  
Fremont, CA 94539-3204 ! WWW: <<http://www.warpspeed.com/>>  
Fax: (510) 770-9854 !  
~~~~~

37. re: [NETSIG:3002] Re: PC Power supplies

From: rbenny@cbcph.navy.mil
Date: Tue, 3 Dec 96 8:31:03 PST
To: netsig@tapr.org
Message-ID: <vines.zY49+5L3dMA@bansmt.pcbcph.navy.mil>
Rendered body type: text/plain

Is there anything wrong with using a UPS to do the 120 VAC regulation for these computers?

I run a DX Packet node at one site and a remote JNOS at another, both use APC UPS's. They have never failed me over the 5 years I have been using them. Power drops, surges, spikes, etc., no longer have any effect on my computers. I run them only on the computer.

New, the 250 watt UPS is only \$140 or so. Check computer shows and other sources, I have found prices to vary quite abit.

Ray, N6VR

Original Text

From: strohs@halcyon.com, on 02-12-96 11:34 PM:

On Mon, 2 Dec 1996, dave land wrote:

> Somebody was looking for 12 VDC input PC power supplies the other day. I
> found them in a catalog today but I don't think you really want one when
> you see the price. CyberResearch (800-341-2525) has a 160W model, 12 VDC
> @ 25 amps in, standard PC outputs, \$395!!!! Ouch!
> 73, Dave

Dave:

Thanks for running that down. It's an obvious need and it doesn't surprise me that SOMEONE is filling it.

The price doesn't bother me nearly so much as the 25A@12V input! Yeouch! That sounds like an inefficient linear supply rather than a switcher to me. As inefficient as it seems, it still seems that price performance favors using a 12V to 120V inverter in front of a regular PC power supply for running a regular PC on 12V.

I'll presume they have a Web site and go hunting tomorrow at work on the fast Web Browser.

Steve N8GNJ

--

Steve Stroh Woodinville, Washington, USA strohs@halcyon.com

38. Re: 9600 backbone radios

From: waljkh@ix.netcom.com (Dave Maciorowski)
Date: Tue, 03 Dec 1996 11:36:40 -0700
To: netsig@tapr.org
Message-ID: <199612031837.KAA10485@dfw-ix5.ix.netcom.com>
Rendered body type: text/plain

Hi Guys,

>Of all the Land Mobile radios I'm aware of, the one that seems to be the
>biggest favorite for 9600 / 19.2K conversion is the Motorola Mitrek
>series. They're reasonably available, reasonably priced, relatively easy
>to modify, perform well after modification, and reliable.
>
>They can be obtained from CW Wolfe Communications in Billings, Montana and
>surely from other dealers of surplus Land Mobile radios.
>
>There are instructions posted on the Web (pointers, anyone?) for
>converting Mitreks to 9600 and 19.2K. TAPR is working on a book that
>documents various Land Mobile radio conversions to 9600.

The mods for Mitrek use at 9600 baud are available at:

<http://www.gag.com/hamradio/mitrek.html>

I have UHF Micor mods available by e-mail. E-mail me privately for them.

73,

Dave

Dave Maciorowski, WA1JHK
Colorado Repeater Association, Inc.
Serving Colorado with Voice and Data, 6-Meters to 1.2 Gig

Internet: waijkh@ix.netcom.com or waijkh@amsat.org
CRA: <http://www.rmsd.com/hamradio/cra/>

39. Re: [NETSIG:3007] Re: PC Power supplies

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Tue, 3 Dec 1996 12:58:48 -0600
To: netsig@tapr.org
Message-ID: <v0300783baeca28e73433@129.120.111.42>
Rendered body type: text/plain

>Is there anything wrong with using a UPS to do the 120 VAC regulation for
>these computers?
>I run a DX Packet node at one site and a remote JNOS at another, both use
>APC UPS's. They have never failed me over the 5 years I have been using
>them. Power drops, surges, spikes, etc., no longer have any effect on my
>computers. I run them only on the computer.
>New, the 250 watt UPS is only \$140 or so. Check computer shows and other
>sources, I have found prices to vary quite abit.
>
>Ray, N6VR
>-----
>Original Text
>From: strohs@halcyon.com, on 02-12-96 11:34 PM:
>On Mon, 2 Dec 1996, dave land wrote:
>
>> Somebody was looking for 12 VDC input PC power supplies the other day. I
>> found them in a catalog today but I don't think you really want one when
>> you see the price. CyberResearch (800-341-2525) has a 160W model, 12 VDC
>> @ 25 amps in, standard PC outputs, \$395!!!! Ouch!
>> 73, Dave
>
>Dave:
>
>Thanks for running that down. It's an obvious need and it doesn't
>surprise me that SOMEONE is filling it.
>
>The price doesn't bother me nearly so much as the 25A@12V input! Yeouch!
>That sounds like an inefficient linear supply rather than a switcher to
>me. As inefficient as it seems, it still seems that price performance
>favors using a 12V to 120V inverter in front of a regular PC power supply
>for running a regular PC on 12V.
>
>I'll presume they have a Web site and go hunting tomorrow at work on the
>fast Web Browser.
>
>Steve N8GNJ
>
>--
>Steve Stroh Woodinville, Washington, USA strohs@halcyon.com

Greg Jones, WD5IVD
Austin, Texas
wd5ivd@tapr.org
http://www.tapr.org/~wd5ivd

40. Re: [NETSIG:3007] Re: PC Power supplies

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Tue, 3 Dec 1996 13:00:16 -0600
To: netsig@tapr.org
Message-ID: <v0300783caeca28ed359f@[129.120.111.42]>
Rendered body type: text/plain

>Is there anything wrong with using a UPS to do the 120 VAC regulation for
>these computers?
>I run a DX Packet node at one site and a remote JNOS at another, both use
>APC UPS's. They have never failed me over the 5 years I have been using
>them. Power drops, surges, spikes, etc., no longer have any effect on my
>computers. I run them only on the computer.
>New, the 250 watt UPS is only \$140 or so. Check computer shows and other
>sources, I have found prices to vary quite abit.
>
>Ray, N6VR

Maybe you can go into more depth about the site.

Temp controlled ?
Indoor or outdoor ?
do you use HD and what type ?
Is it in the penthouse or eleveator room ?
How tall a building...
all those things that would all someone like me to visualize your
site and put it in my context.

Cheers - Greg

Greg Jones, WD5IVD
Austin, Texas
wd5ivd@tapr.org
http://www.tapr.org/~wd5ivd

41. Re: [NETSIG:3007] Re: PC Power supplies

From: Steve Sampson <ssampson@claven.tinker.af.mil>
Date: Tue, 03 Dec 1996 12:58:01 -0600
To: netsig@tapr.org
Message-ID: <32A47839.2781@eds.tinker.af.mil>
Rendered body type: text/plain

rbenny@cbcpn.navy.mil wrote:

>
> Is there anything wrong with using a UPS to do the 120 VAC regulation for
> these computers?
> I run a DX Packet node at one site and a remote JNOS at another, both use
> APC UPS's. They have never failed me over the 5 years I have been using
> them. Power drops, surges, spikes, etc., no longer have any effect on my
> computers. I run them only on the computer.

Actually not. But what a lot of sites do is have one main battery buss,
with 12 VDC running to everything. But a big UPS would work to. UPS's
are really just a fancy name for an Inverter with a built-in battery.

But put a couple 80 Watt transmitters and computer stuff together, and you
need some large capacity cells to run everything for a day. Thus, it would
be easier to tap into the 12 V buss, rather than to have a seperate battery
for each unit.

But maybe I'm wrong. Maybe it really is cheaper to put a UPS on every radio
and computer??

Steve

42. Re: [NETSIG:2968] IS IT ALIVE?

From: "Charles E. Gelm" <gelmc@erinet.com>
Date: Wed, 04 Dec 1996 08:44:10 -0800
To: netsig@tapr.org
Cc: tommath@norwich.net
Message-ID: <32A5AA5A.307D@erinet.com>

Rendered body type: text/plain

Thomas I Mathewson wrote:

>
> I have not gotten anything from netsig in awhile and was wondering if
> it was still alive or has it died off?
>
> 73 Tom KA2MYD

Hi, Tom:

I think that it is dead quiet !

73
Chuck
nc8q

43. routes that just won't die

From: "Charles E. Gelm" <gelmc@erinet.com>
Date: Wed, 04 Dec 1996 08:59:48 -0800
To: netsig@tapr.org
Message-ID: <32A5AE04.3D3B@erinet.com>
Rendered body type: text/plain

Howdy, All:

I think I have a local problem.

It seems to be associated with groups of nodes that use port port
quality values of 240 and 250.

1. If a node route get entered into the node list of these 'high quality'
nodes and then goes physically qrt, the other nodes keep claiming a
'high quality'-1 route to it.
2. Many of these 'high quality' nodes also have a 'user port' with a
quality value of 150. When one of these 'high quality' nodes
broadcasts a route on its 150 quality port to its 240 quality port
neighbors, they all think they have a 239 quality route to the
node, but not on its real physical link port, only to each other !
The route becomes locked inside the 'high quality' ports nodes/routes.

I know NEDA has some standards/specifications and they claim it
works. Locally, I cannot get a netrom connect to anything on 'my neighbors'
150 quality ports. This local scheme does not seem to work.

Is there any documentation or opinions that a spread of quality values
between network and user port of 240 / 150 won't work ? is not good
practice ? is this proper quality values ?

Help.

73
Chuck
nc8q

44. Re: [NETSIG:2970] Re: IS IT ALIVE?

From: "Charles E. Gelm" <gelmc@erinet.com>
Date: Wed, 04 Dec 1996 09:05:11 -0800
To: netsig@tapr.org
Message-ID: <32A5AF47.6C3@erinet.com>
Rendered body type: text/plain

Robert wrote:

>
> Too ask a ? and see:
> What's are the "turn-key" 9600 or 19200 radio/nodes
> that can be setup easy and put on line.
> --
> 73 Robert W5AJ w5robert@blkbox.com

Hi, Robert:

Yea, right! Plug and Play 9k6 or 19k2 radios.
Ha! However, tapr plans higher speed Spread Spectrum sometime
next year. I don't consider a FCC-STA 'plug & play', but I am
hard to please. :-|

So far, AFAIK, 9k6 and up requires a frequency counter and a
deviation meter to set up.

73
Chuck
nc8q

45. Inverters and UPS's

From: David Rush <rush@op.ks.erg.sri.com>
Date: Wed, 04 Dec 1996 08:14:23 -0600
To: netsig@tapr.org
Message-ID: <199612041414.IAA03996@op.ks.erg.sri.com>
Rendered body type: text/plain

I've been using a StatPower PortaWattz 300 power inverter to power a laptop and ethernet bridge from vehicle power. Works okay, aside from the high voltage shutdown kicking in from my vehicle's 14.75VDC (running) output, rather than the spec'ed 15VDC max. (Statpower has offered to fix that as soon as I send it back to them or to the place of purchase.) Works fine off of static battery power. I picked it up at a truck stop for \$70.

Even at a site with a 12VDC backup power bus along with commercial 110VAC power, it looks to me like it's still probably cheaper to use an UPS for the computer (or an inverter like above on the 12VDC bus) than to get a \$400 12VDC power supply for the computer.

David, n0oxh

46. Re: [NETSIG:2973] Re: 9600/19.2K radios

From: "Charles E. Gelm" <gelmce@erinet.com>
Date: Wed, 04 Dec 1996 09:18:00 -0800
To: netsig@tapr.org
Message-ID: <32A5B248.1715@erinet.com>
Rendered body type: text/plain

Steve Stroh wrote:

>
> On Sat, 30 Nov 1996, Robert wrote:
>
> > Too ask a ? and see:
> > What's are the "turn-key" 9600 or 19200 radio/nodes
> > that can be setup easy and put on line.
> > --
> > 73 Robert W5AJ w5robert@blkbox.com
>
> They're a done deal. UHF only at the moment, 2W or 5W. A 220 version has
> been rumored. They're made by Tekk and can be purchased from PacComm
> crystallized for your frequency of choice. 19.2K is a stock 9600 unit with
> modified filters.
>
> PacComm's web page is at <http://www.paccomm.com>
>
> Steve N8GNJ
> NetSIG Chairperson and Mailing List Moderator
> n8gnj@tapr.org

Hi, Steve:

Can these radios be installed and tuned without a freq. counter and deviation meter?

73
Chuck
nc8q

47. Re: [NETSIG:3008] Re: 9600 backbone radios

From: kc2jo@ldd.net (JOHN TAYLOR)
Date: Wed, 4 Dec 1996 08:41:39 -0600 (CST)
To: netsig@tapr.org
Message-ID: <199612041441.IAA24960@cdale3.midwest.net>
Rendered body type: text/plain

Hello Dave,

I saw your info on the mitrek radio's and was wondering if you had any info on Mocom 70's. I have a couple of these and would like to put them to use on our UHF 9600 backbone.

Tnx es 73

JOHN TAYLOR
kc2jo@ltd.net

48. Re: [NETSIG:3000] Re: 9600 backbone radios

From: "Charles E. Gelm" <gelmc@erinet.com>
Date: Wed, 04 Dec 1996 10:25:19 -0800
To: netsig@tapr.org
Message-ID: <32A5C20F.765E@erinet.com>
Rendered body type: text/plain

rwhart@ix.netcom.com wrote:

>
> I have a 100 watt Mitrek that I would like to use on 2mtrs. Would appreciate any
> pointers on what is required to do conversion.
> -----
> Name: Roderick W. Hart
> E-mail: rwhart@ix.netcom.com
> Amateur Radio Station WA3MEZ
> US ARMY MARS Station AAR3DQ
> Date: 12/2/96
> Time: 9:52:04 PM
> -----

Hi, Roderick:

Here comes a .txt file that I saved last night from somewhere.
I could probably come up with a URL later, but for now, I'll
include the .txt version that I put on packet last night.

73
Chuck
nc8q
[Attachment: MITREK.TXT; text/plain; 5,011 bytes]

49. Re: [NETSIG:3016] Re: 9600/19.2K radios

From: Steve Stroh <strohs@halcyon.com>
Date: Wed, 4 Dec 1996 07:45:20 -0800 (PST)
To: netsig@tapr.org
Message-ID: <Pine.Ult.3.95.961204073738.19059B-100000@coho.halcyon.com>
Rendered body type: text/plain

On Wed, 4 Dec 1996, Charles E. Gelm wrote:

> Hi, Steve:
>
> Can these radios be installed and tuned without a freq. counter
> and deviation meter?

I never needed a freq counter to tune the Tekk's I've had. I've had Tekk
crystal, and recrystal mine when it was needed. (That was before PacComm
was fully up to speed with the Tekks- any Tekks I purchase now will
probably be from PacComm).

A deviation meter is nice, and will do the best job of setting the
deviation, but what worked for me initially was to ping (I'm a TCP/IP
user) another system over one of our 9600 baud digital repeaters and tweak
the modem's deviation pot ever so slightly until it began working. I was
able to improve that slightly with the use of a deviation meter a couple
of months later, though.

One solution we came up to everyone having a deviation meter was to have
periodic "deviation setting" parties where everyone brought their systems
to one place on a Saturday and someone borrowed a Comm Analyzer from work
and brought it.

Steve N8GNJ

50. As long as we are talking radios...

From: Marvin Munster x85388 <mmunster@qualcomm.com>
Date: Wed, 04 Dec 1996 08:47:15 -0800
To: netsig@tapr.org
Message-ID: <3.0.32.19961204084714.00295cd8@houdini.qualcomm.com>
Rendered body type: text/plain

I have a question that probably doesn't belong here, but there are a lot of experts on the subject on this sig. This question came from a meeting about building a repeater where no one could agree on anything about these radios.

Does anyone have any experience on using Motorola Mitrek and Micor radios as voice repeaters. This information would probably be handy for packet nodes as well.

Now that's obvious that both work fine.

What I am looking for is if you had a choice to do it correctly. I have both available and the cost is similar. The 35 to 45 watt models are the range I am looking for.

Which would be the choice and why?

Is the older Micor better because it is bigger and has a bigger heat sink?

Is the Mitrek better because it is newer?

Which one has the longer MTBF?

Which is more stable?

Which works better at 2 meters?

Which works better at 440?

What about adjacent channel interference?

Which is the easier to maintain?

Which is the easier to duplex?

How about using 2 radios, one for RX and one for TX. (Swap in case of failure)

Any other comments would be appreciated.

If you feel general answers are inappropriate for this SIG, please e-mail me directly at WB6PKK@amsat.org.

Thanks in advance for everyone's help.

Marvin - WB6PKK

```
      \ / \
      / \ / \
      | \ | (o) (o) | / |
-----o000o-----oo-----o000o-----
| Marvin J. Munster - WB6PKK |
| WB6PKK@W6NWG.#SOCA.CA.US.NOAM |
| WB6PKK@AMSAT.org |
|-----0000.-----|
      .0000      ( )
      ( )      ) /
      \ (      (_/
      \_)
```

51. [NETSIG:3020] As long as we are talking radios... -Reply

From: Orville Beach <Orv@micom.com>
Date: Wed, 04 Dec 1996 10:54:42 -0800
To: netsig@tapr.org
Message-ID: <s2a5591e.054@micom.com>
Rendered body type: text/plain

>>> Marvin Munster x85388
<mmunster@qualcomm.com> 12/04/96 08 56am
>>>

I have a question that probably doesn't belong here, but there are a lot of experts on the subject on this sig. This question came from a meeting about building a repeater where no one could agree on anything about these radios.

Does anyone have any experience on using Motorola Mitrek and Micor radios

as voice repeaters. This information would probably be handy for packet nodes as well. Now that's obvious that both work fine. What I am looking for is if you had a choice to do it correctly. I have both available and the cost is similar. The 35 to 45 watt models are the range I am looking for.

Which would be the choice and why?
Is the older Micor better because it is bigger and has a bigger heat sink?
Is the Mitrek better because it is newer?
Which one has the longer MTBF?
Which is more stable?
Which works better at 2 meters?
Which works better at 440?
What about adjacent channel interference?
Which is the easier to maintain?
Which is the easier to duplex?
How about using 2 radios, one for RX and one for TX. (Swap in case of failure)

Any other comments would be appreciated.
If you feel general answers are inappropriate for this SIG, please e-mail me directly at WB6PKK@amsat.org.

Thanks in advance for everyone's help.

Marvin - WB6PKK

I'm certainly no expert on commercial radios, but I was TOLD that the Mitreks generate too much noise (or leak too much, possibly) to make a repeater out of them where the TX and RX were in the same chassis. Using two separate radios would certainly work.

I was also told by this person that the similar GE radio (don't recall the model number) worked much better as a repeater. (I'd also like to point out that this person might have had a pro-GE bias). I'd appreciate any comments also; always looking to learning from the tremendous pool of knowledge in this group!

73 - Orv - W6BI (ex-WB6WEY)
orv@micom.

52. Re: [NETSIG:3013] routes that just won't die

From: burt lang <burt@roccler.qc.ca>
Date: Wed, 04 Dec 1996 13:13:21 +0000
To: gelmce@erinet.com
Cc: netsig@tapr.org
Message-ID: <32A578F0.6DBA@roccler.qc.ca>
Rendered body type: text/plain

Charles E. Gelm wrote:

>
> Howdy, All:
>
> I think I have a local problem.
> It seems to be associated with groups of nodes that use port port
> quality values of 240 and 250.
>
> 1. If a node route get entered into the node list of these 'high quality'
> nodes and then goes physically qrt, the other nodes keep claiming a
> 'high quality'-1 route to it.

Normally yes with TheNET 2.x or X1 up to X1H. If the node is an X1J with the alternate broadcast algorithm enabled (mode 9=2 or 3) this effect is inhibited very effectively.


```

>
> 2. Many of these 'high quality' nodes also have a 'user port' with a
> quality value of 150. When one of these 'high quality' nodes
> broadcasts a route on its 150 quality port to its 240 quality port
> neighbors, they all think they have a 239 quality route to the
> node, but not on its real physical link port, only to each other !
> The route becomes locked inside the 'high quality' ports nodes/routes.
>

```

Not quite. The broadcast quality will get reduced by the factor
"port_quality/256"
or in the case mentioned $150 \times 240/256 = 141$

```

> I know NEDA has some standards/specifications and they claim it
> works. Locally, I cannot get a netrom connect to anything on 'my neighbors'
> 150 quality ports. This local scheme does not seem to work.
>
> Is there any documentation or opinions that a spread of quality values
> between network and user port of 240 / 150 won't work ? is not good
> practice ? is this proper quality values ?
>
> Help.
>
> 73
> Chuck
> nc8q

```

I will address the situation of nodes that do not implement the X1J alternate broadcast algorithm as these are the main problem. There are a number of factors that determine how long a node stays active in a node stack or wider network in the NETROM/TheNET system.

1/ The "quality reduction factor(QR factor)" =port_quality/256. This determines how much the quality is reduced on each hop no matter whether the hops are out into the network or around the same small number of nodes on the same node stack matrix.

2/ The "minimum to broadcast quality". This determines the "stopping" point for the hopping. When the quality is reduced below this value the propagation stops for that particular route. At this point the quality is equal to the initial port quality when it entered the node list on the first node times the nth power of the QR factor. Solve for n and you have the number of hops that that route will stay alive.

Using NEDA's parms of 203 initial quality for known good nodes, 50 minimum to broadcast and a QR factor of $203/256=0.8$, you have 6 hops. If the QR factor is raised to $230/256=0.9$, it will go 10 hops for a 150 initial quality or 14 hops for a 230 initial quality. At 240 this becomes 17 and 25 hops. For 250 initial quality, it is 46 and 68 respectively. At 255 the number of hops are infinite (literally since the node appears to round to the nearest number). The reason for NEDA's initial quality of 203 is to keep the node list under control (to no more than 6 hops - 7 nodes). We used to run 230 and had node lists over 100 in the more congested areas. For the above reason we avoid high qualities (except on wireline links linking 2 halves of a node stack together - where there are only 2 nodes connected together the invalid routes do not occur).

3/ Initial port quality. This should be kept low except for known, good reliable, "wanted" routes. If the default port quality is set high, then any received transient node whether it be due to a propagation inversion, a xNOS user with his NETROM broadcast enabled or a "rogue" non-compliant node, will be entered into the node list and will circulate for the calculated number of hops until it dies. Better to set default quality low such as equal to the minimum to broadcast if you want to see the nodes received on a particular radio port but not have them propagate or to 0 if unknown nodes are not wanted at all in the network. Then lock into the ROUTES list the nodes that are known reliable.

4/ Broadcast interval. Obviously the shorter the broadcast period, the quicker the node lists will get purged of transient entries. This was the main reason NEDA dropped the broadcast interval from 30 minutes to 15 minutes. There is a trade-off between short node broadcast interval and higher broadcast overhead on the channel. Keeping the node list within reason will control the overhead. (Note however that the broadcast interval at each end of a link must be the same).

5/ The Initial_Obsolence_Count minus Minimum_Obs_Count_to_Broadcast. This difference determines how long each route will remain in a given node before it stops broadcasting it. A difference of 2 for a high quality backbone link or 3 for a good shared link is appropriate. Nodes coming in on seriously congested channels should not be propagated at all as they are usually very unreliable and slow.

The problem of unusable routes pointing into a matrix is valid on all nodes up to X1H. When the good route decays, it is dropped from the node list but is replaced by the next lower entry which comes back from the matrix in a loopback effect. This will continue until all node route entries in all the nodes in the node stack or network have decayed. That could take days if the parameters are not appropriate.

With the advent of TheNET X1J and its "alternate broadcast algorithm", this problem is solved. If this mode is enabled (MODE #9=2 or 3), then any node information received from another node is NOT broadcast out on the same port it came in on. This is most appropriate for the serial port (Mode9=2) but can be useful even on the radio port as well (Mode9=3) (in the case of user ports where node-to-node-to-node links are to be discouraged). With this mode enabled, whenever a transient node has decayed in its node list, it is gone with little danger of being refreshed from another source (except from a non-X1J node on the radio port - another reason for keeping radio ports under control). In the NEDA network with current recommended parameters, such transients will be purged well within 2 hours if they get entered at all. Failed known nodes will decay within 2 hours.

BTW BPQ ver 4.08 switches have an equivalent mode to the X1J alternate algorithm. It is enabled with the QUALADJUST=x (%) in the port parameters config list. Setting x=100 will yield equal results (I think) to the X1J alternate broadcast algorithm.

Your other problem of not being able to do network connections to nodes in the node list could also be the result of unequal parameters on links and ports. All valid links must have equal quality and broadcast intervals at both ends of the link, both radio and serial port links). If not, nodes that show at a distant point may not have the node route info available to respond to a connect request from the distant point.

I apologize for the long winded discussion but I hope that it will provide some material for thought and for reasoning out the problems you are having.

Burt VE2BMQ
Tech Chairman NEDA

53. Re: [NETSIG:3013] routes that just won't die

From: "Rod Fowler (afa1nc)" <k2adj@mosquito.com>
Date: Wed, 4 Dec 1996 14:47:18 -0500 (EST)
To: netsig@tapr.org
Message-ID: <199612041947.0AA21044@itchy.mosquito.com>
Rendered body type: text/plain

At 08:02 AM 12/4/96 -0600, you wrote:
>Howdy, All:
>
> I think I have a local problem.
> It seems to be associated with groups of nodes that use port port
>quality values of 240 and 250.
>

All I can give you is what we use here in Southern NJ on several stacks..

Those TNC's in a stack that are tied together via the back plane are given a high quality of 230 or 250, not sure but it is definitely HIGH...

Any node "heard" via a radio port is given a quality of 150 regardless of port it came in on..

This has worked since the Stacks were put up many many years ago and has worked flawlessly. Yes, some times another stack will have higher settings and when a node goes down it does take a few hours for the looping to stop but it eventually does..

73 de Rod

54. Re: [NETSIG:3014] Re: IS IT ALIVE?

From: cunninghamt@ccgate.genrad.com
Date: Wed, 04 Dec 96 15:12:20 EST
To: netsig@tapr.org
Message-ID: <9611048497.AA849745411@ccgate.genrad.com>
Rendered body type: text/plain

That should be Plug and PRAY ! (pray that it works)...
<grin>

Tim - N8DEU

Reply Separator

Subject: [NETSIG:3014] Re: IS IT ALIVE?
Author: netsig@tapr.org at CCGATE
Date: 12/4/96 10:04 AM

Robert wrote:
>
> Too ask a ? and see:
> What's are the "turn-key" 9600 or 19200 radio/nodes
> that can be setup easy and put on line.
> --
> 73 Robert W5AJ w5robert@blkbox.com

Hi, Robert:

Yea, right! Plug and Play 9k6 or 19k2 radios.
Ha! However, tapr plans higher speed Spread Spectrum sometime
next year. I don't consider a FCC-STA 'plug & play', but I am
hard to please. :-|

So far, AFAIK, 9k6 and up requires a frequency counter and a
deviation meter to set up.

73
Chuck
nc8q

55. Mods for 2mtr. Mitrek

From: rwhart@ix.netcom.com
Date: Wed, 4 Dec 96 21:17:38 est
To: netsig@tapr.org
Message-ID: <Chameleon.849752596.rwhart@pc.wa3mez.netcom.com>
Rendered body type: text/plain

Has anyone modified a VHF Mitrek. I have received several copies of mod notes for
the UHF version. Help!

Name: Roderick W. Hart
E-mail: rwhart@ix.netcom.com
Amateur Radio Station WA3MEZ
US ARMY MARS Station AAR3DQ
Date: 12/4/96
Time: 9:17:38 PM

56. TPRS Fall Digital Symposium this weekend

From: David Wolf <wo5h@tapr.org>
Date: Wed, 04 Dec 1996 21:48:51 -0600
To: netsig@tapr.org
Cc: bbssig@tapr.org
Message-ID: <32A64623.10D0@tapr.org>
Rendered body type: text/plain

All:

If Austin, Texas isn't too far away this weekend, you're invited to
attend the 1996 Texas Packet Radio Society's Fall Digital Symposium.

Check out our web site for the agenda and details.

<http://www.tprs.org>

73, and hope to see you there!

Dave Wolf W05H
President
TPRS

57. Re: [NETSIG:3019] Re: 9600/19.2K radios

From: Chris Sussmann <cmsuss@fullnet.net>
Date: Thu, 05 Dec 1996 00:49:51 -0600
To: netsig@tapr.org
Message-ID: <1.5.4.16.19961205064951.288f899e@fullnet.net>
Rendered body type: text/plain

At 09:48 AM 12/4/96 -0600, you wrote:
>
>On Wed, 4 Dec 1996, Charles E. Gelm wrote:
>
>> Hi, Steve:
>>
>> Can these radios be installed and tuned without a freq. counter
>> and deviation meter?
>
>I never needed a freq counter to tune the Tekk's I've had. I've had Tekk
>crystal, and recrystal mine when it was needed. (That was before PacComm
>was fully up to speed with the Tekks- any Tekks I purchase now will
>probably be from PacComm).

My experience with the KS-900 wasn't the same. We initially got them on the
stock freqs and they needed to be tuned and mod'ed. When we decided to
re-crystal, they needed to be tuned again. I would however, order more if
the need arises. They seem to be the easiest thing to get on 9600.

>
>A deviation meter is nice, and will do the best job of setting the
>deviation, but what worked for me initially was to ping (I'm a TCP/IP
>user) another system over one of our 9600 baud digital repeaters and tweak
>the modem's deviation pot ever so slightly until it began working. I was
>able to improve that slightly with the use of a deviation meter a couple
>of months later, though.

I found a deviation meter a must. We were not able to make connections with
out many retries and adjusting the deviation and tx and rx freqs.

>One solution we came up to everyone having a deviation meter was to have
>periodic "deviation setting" parties where everyone brought their systems
>to one place on a Saturday and someone borrowed a Comm Analyzer from work
>and brought it.

We ended up doing almost the samething.
>
>Steve N8GNJ
>
>--
>Steve Stroh Woodinville, Washington, USA strohs@halcyon.com
>
>
Chris N1UOC
cmsuss@fullnet.net

58. Re: [NETSIG:3025] Mods for 2mtr. Mitrek

From: "Karl F. Larsen" <k5di@acca.nmsu.edu>
Date: Thu, 5 Dec 1996 05:36:15 -0700 (MST)
To: netsig@tapr.org
Message-ID: <199612051236.FAA10739@acca.nmsu.edu>
Rendered body type: text/plain

At 08:29 PM 12/4/96 -0600, you wrote:
>Has anyone modified a VHF Mitrek. I have received several copies of mod
notes for
>the UHF version. Help!

I have not done a VHF yet but I have one. And it is VERY similar to
the UHF ones that I have done. The main changes are to the crystal
oscillators and those are identical. Try it after you get it on freq and see
if the "eye" pattern is good. If not then do the receiver fix.

>-----
>Name: Roderick W. Hart
>E-mail: rwhart@ix.netcom.com
>Amateur Radio Station WA3MEZ
>US ARMY MARS Station AAR3DQ

>Date: 12/4/96
>Time: 9:17:38 PM
>-----
>
>
>
73, de Karl aka k5di

Karl F. Larsen Box 74, Mesilla Park, NM 88047 (505) 524-3303
k5di@k5di.cruces.nm.usa.noam k5di@acca.nmsu.edu k5di@juno.com

59. Re: [NETSIG:3027] Re: 9600/19.2K radios

From: Steve Sampson <ssampson@oklahoma.net>
Date: Thu, 05 Dec 1996 06:44:57 -0600
To: netsig@tapr.org
Message-ID: <32A6C3C9.5216@oklahoma.net>
Rendered body type: text/plain

Chris Sussmann wrote:

>
> At 09:48 AM 12/4/96 -0600, you wrote:
> >
> >On Wed, 4 Dec 1996, Charles E. Gelm wrote:
> >
> >> Hi, Steve:
> >>
> >> Can these radios be installed and tuned without a freq. counter
> >> and deviation meter?
> >
> > I never needed a freq counter to tune the Tekk's I've had. I've had Tekk
> > crystal, and recrystal mine when it was needed. (That was before PacComm
> > was fully up to speed with the Tekks- any Tekks I purchase now will
> > probably be from PacComm).
> >
> My experience with the KS-900 wasn't the same. We initially got them on the
> stock freqs and they needed to be tuned and mod'ed. When we decided to
> re-crystal, they needed to be tuned again. I would however, order more if
> the need arises. They seem to be the easiest thing to get on 9600.

Chris, J says he can't hit you anymore since you put in the power divider.

I've never had a real problem with TX frequency on these KS-900 radios, but one optimization was tuning my receive frequency to the other. I use an O'Scope and look at the DC level at the discriminator. You can use a local radio to go up and down 5 kHz to see which way is which (I seem to recall the Tekk going the standard way--more positive for high error). Then you can get the other end to key down and crank on the L.O. to align your discriminator to zero volts, and center your IF. I think the PacComm Tekk's probably wouldn't need this, as they have better bandwidth filters.

> > A deviation meter is nice, and will do the best job of setting the
> > deviation, but what worked for me initially was to ping (I'm a TCP/IP
> > user) another system over one of our 9600 baud digital repeaters and tweak
> > the modem's deviation pot ever so slightly until it began working. I was
> > able to improve that slightly with the use of a deviation meter a couple
> > of months later, though.
> >
> I found a deviation meter a must. We were not able to make connections with
> out many retries and adjusting the deviation and tx and rx freqs.

I found a deviation meter worthless. Well, one designed for 1200 packet anyway. I set the thing for 3 kHz and it even sounded hot. I finally decided on listening with a scanner, and going from a low hiss to a higher hiss while watching the IP pings come back. I guess at that point you could measure the deviation and use that for 3 kHz 9600 calibration...

FWIW

Steve, N50WK

60. Re: Inverters and UPS's

From: waljkh@ix.netcom.com (Dave Maciorowski)
Date: Thu, 05 Dec 1996 09:39:29 -0700
To: netsig@tapr.org
Message-ID: <199612051640.IAA00964@dfw-ix6.ix.netcom.com>
Rendered body type: text/plain

Hi Gang,

>Even at a site with a 12VDC backup power bus along with commercial 110VAC
>power, it looks to me like it's still probably cheaper to use an UPS
>for the computer (or an inverter like above on the 12VDC bus) than to
>get a \$400 12VDC power supply for the computer.

It's hard to believe that there isn't a ham around that's a power supply designer that would design an appropriate power supply for a PC that runs on 11-15 VDC. If the design were available, maybe TAPR would offer a kit. The kit could be built and installed in a gutted PC AC supply case (we all have dead ones, don't we?) for easy installation in a PC chassis.

What's an "appropriate" supply? 11-15VDC in (gotta handle batteries down to 11), outs at +5@20A, +12@8A, -12@.5. (Does anybody really use the -5 anymore?) It should really be a switcher (WITH filtering!) for efficiency, cool operation, and the regeneration of the +12 from only 11V in. The currents could be reduced substantially for node installations with minimal hardware. The +12 could easily be reduced to .5A for those installations that don't have a hard drive -- some 3-1/2" floppies, eg. Chinon, only need +5. (Does anybody know if the 2-1/2" laptop hard drives run on +5-only?) The power supply could also contain a watchdog and a low-voltage sensor for graceful shutdown and restart.

Any takers?

73,

Dave

Dave Maciorowski, WA1JHK
Colorado Repeater Association, Inc.
Serving Colorado with Voice and Data, 6-Meters to 1.2 Gig

Internet: waljkh@ix.netcom.com or waljkh@amsat.org
CRA: <http://www.rmsd.com/hamradio/cra/>

61. Re: 9600 backbone radios

From: waljkh@ix.netcom.com (Dave Maciorowski)
Date: Thu, 05 Dec 1996 09:39:34 -0700
To: netsig@tapr.org
Message-ID: <199612051640.IAA00977@dfw-ix6.ix.netcom.com>
Rendered body type: text/plain

Hi John,

>I saw your info on the mitrek radio's and was wondering if you had any info
>on Mocom 70's. I have a couple of these and would
>like to put them to use on our UHF 9600 backbone.
>
>JOHN TAYLOR
>kc2jo@ldd.net

I have a couple of Mocom 70's, but have not taken the time to evaluate them for operation at 9600. Take a look at the manual. If there's a CTCSS, PL, or DCS input directly to an FM modulator, you're in luck and the tx will be an easy mod. In the receiver, you might have to remove a filter or two in the IF to flatten out the receiver passband.

Even though the UHF Micors that we use have an FM modulator, the 2-meter Micor DOES NOT. (We all know what assume spells :-)

73,

Dave

Dave Maciorowski, WA1JHK
Colorado Repeater Association, Inc.
Serving Colorado with Voice and Data, 6-Meters to 1.2 Gig

Internet: waljkh@ix.netcom.com or waljkh@amsat.org
CRA: <http://www.rmsd.com/hamradio/cra/>

62. Re: As long as we are talking radios...

From: waljkh@ix.netcom.com (Dave Maciorowski)
Date: Thu, 05 Dec 1996 09:39:39 -0700
To: netsig@tapr.org
Message-ID: <199612051640.IAA00993@dfw-ix6.ix.netcom.com>
Rendered body type: text/plain

Hi Marvin,

>I have a question that probably doesn't belong here, but there are a lot of
>experts on the subject on this sig. This question came from a meeting
>about building a repeater where no one could agree on anything about these
>radios.

The same information applies to digital applications so this is an appropriate place for it.

>Does anyone have any experience on using Motorola Mitrek and Micor radios
>as voice repeaters. This information would probably be handy for packet
>nodes as well.

My experience is with VHF (5) and UHF Micors (10) and VHF (4) and UHF GE Mastr IIs (1) on voice and data. Another group here in Colorado (PPFMA, Pike's Peak), has a lot of experience with the Mitrek.

>Now that's obvious that both work fine.
>What I am looking for is if you had a choice to do it correctly. I have
>both available and the cost is similar. The 35 to 45 watt models are the
>range I am looking for.

Is this the output power that you want? Then, you should be looking at mobile radios with twice that power. Set the power to 50%, add a fan and they run forever.

Hmmm. Lot's of questions :-). There almost needs to be a selection matrix...

>Which would be the choice and why?

All Micors operate well in full-duplex. They have sufficient internal separation/isolation that they don't desense. BUT, you must be careful bringing out the second antenna connection -- it must be well shielded.

I have heard reports that both Mitreks and GE Mastr IIs MAY be susceptible to internal desense. I've also heard reports that these radios work fine. Your mileage may vary. Careful attention to your mods probably makes the difference.

2-meter Micor receivers are a problem. Unless you're lucky to find the right version of the radio, the helical resonators in the receiver either have to be modified or replaced with the right ones.

UHF Micors are easy. AND, they only need a single crystal for tx and rx on either simplex or with a 5 MHz offset.

GE Mstr IIs are easy. BUT, if you use them for 9600 baud, you have to replace the phase modulator with an FM modulator -- not too hard if you just modulate the channel element.

>Is the older Micor better because it is bigger and has a bigger heat sink?

Not really a consideration. Just run any commercial mobile at 50% power and use a fan.

>Is the Mitrek better because it is newer?
>Which one has the longer MTBF?
>Which is more stable?

I have had some problems with the high-power versions of the UHF Micor. Their PAs don't seem too reliable. Since they're so cheap (\$20), just buy a lifetime of spares :-)

>Which works better at 2 meters?
>Which works better at 440?
>What about adjacent channel interference?

I've had good success with Micors and GE Mastr IIs at commercial sites. In one case, I needed to add cavities to keep the nearby 2 megawatts of rf

out of the front end :-)

>Which is the easier to maintain?

I keep a tuned spare around. I ALWAYS ALWAYS use a radio cable brought out to an interface panel. This way the tuned spare can easily be just plugged in and you're back on-the-air.

>Which is the easier to duplex?

All easy.

>How about using 2 radios, one for RX and one for TX. (Swap in case of >failure)

This works ok if you find that you're using radios that have internal desense.

>Comments?

For work on ALL commercial radios, get a REAL manual. Follow the tuneup instructions TO THE LETTER -- the UHF Micor especially, cannot be just "tuned for smoke". I have tuned radios with just a hand-held and power meter, but for the final setup, you really need to get the radio in the same room with a service monitor and set deviation, the limiter (for voice), and frequency. THEN, check it installed with the duplexer and antenna and measure desense, both internal and external. Keep good notes and check it every year or so for drift, detuning, or the installation of a nearby transmitter that's causing you trouble.

73,

Dave

Dave Maciorowski, WA1JHK
Colorado Repeater Association, Inc.
Serving Colorado with Voice and Data, 6-Meters to 1.2 Gig

Internet: waljkh@ix.netcom.com or waljkh@amsat.org
CRA: <http://www.rmsd.com/hamradio/cra/>

63. Re: [NETSIG:3025] Mods for 2mtr. Mitrek

From: Chuck Hast <wchast@utilpart.com>
Date: Thu, 05 Dec 1996 13:26:28 -0500
To: netsig@tapr.org
Message-ID: <32A713D4.5A8@utilpart.com>
Rendered body type: text/plain

rwhart@ix.netcom.com wrote:

>

> Has anyone modified a VHF Mitrek. I have received several copies of mod notes for
> the UHF version. Help!

> -----

> Name: Roderick W. Hart
> E-mail: rwhart@ix.netcom.com
> Amateur Radio Station WA3MEZ
> US ARMY MARS Station AAR3DQ
> Date: 12/4/96
> Time: 9:17:38 PM
> -----

I did the mods to some LOW BAND Mitrek's and they worked just fine.
These

units are on 47 and 48mhz (they are still in commercial use) I followed the mods I got from TAPR, the results were quite good, given that the units are still in mobile service. This system also had a 300 watt Micor (big full sized rack with a final tube) in the system, we did the mods to that unit and it too was doing 9k6 with no problems whatsoever. You could copy it a good 30-40 miles distant in the mobiles, The mobiles just could not get BACK to it.

If you have some Micor base stations around they make very good digital repeaters, of course the voice types know this too 8-].

--

Chuck Hast

64. Re: [NETSIG:3027] Re: 9600/19.2K radios

From: Chuck Hast <wchast@utilpart.com>
 Date: Thu, 05 Dec 1996 13:38:51 -0500
 To: netsig@tapr.org
 Message-ID: <32A716BB.577C@utilpart.com>
 Rendered body type: text/plain

Chris Sussmann wrote:

>
 > At 09:48 AM 12/4/96 -0600, you wrote:
 >
 > I found a deviation meter a must. We were not able to make connections with
 > out many retries and adjusting the deviation and tx and rx freqs.
 >

One thing you must watch out for is the filters which most bench instruments have as switchable. Make sure all the low and high pass filters are switched OUT or you will get the wrong measurements, I remember well doing such measurements on a commercial system while working with another person. The other fellow had brought his Hewlett Packard Service Monitor which we were using to set up all the equipment, I was setting the equipment for 2.7khz dev at 9k6, it would not work at all, and the sound was terrible, even though 9k6 sounds like open squelch, this sounded like open squelch going thru a bad audio stage. I asked the owner of the instrument if all was ok with it, He swore it was just fine, I asked him if there was something that was causing a mis-reading of the deviation, again, 'no' I started looking at the menu on the scope face and as I stepped thru I saw something about IF filter, 300hz hi pass ON --- Turned it off and all of a sudden my 3khz deviation went to about 7.5khz...

Just make sure they are all off and you are looking at a flat passband. HP, TEKTRONICS, IFR, MOTOROLA, all of them have switchable filters, find them and turn them off if they affect the pass band where your data is going to pass.

--

Chuck Hast
 wchast@utilpart.com

kp4djt

65. Re: [NETSIG:3031] Re: 9600 backbone radios

From: Chuck Hast <wchast@utilpart.com>
 Date: Thu, 05 Dec 1996 13:51:35 -0500
 To: netsig@tapr.org
 Message-ID: <32A719B7.2383@utilpart.com>
 Rendered body type: text/plain

Dave Maciorowski wrote:

>
 > Hi John,
 >
 > >I saw your info on the mitrek radio's and was wondering if you had any info
 > >on Mocom 70's. I have a couple of these and would
 > >like to put them to use on our UHF 9600 backbone.
 > >
 > >JOHN TAYLOR
 > >kc2jo@ltd.net
 >
 > I have a couple of Mocom 70's, but have not taken the time to evaluate
 > them for operation at 9600. Take a look at the manual. If there's a CTCSS,
 > PL, or DCS input directly to an FM modulator, you're in luck and the tx will
 > be an easy mod. In the receiver, you might have to remove a filter or two
 > in the IF to flatten out the receiver passband.
 >
 > Even though the UHF Micors that we use have an FM modulator, the
 > 2-meter Micor DOES NOT. (We all know what assume spells :-)
 >

Yes, some of those LOW BAND Micors I worked on were PM'd so they were replaced with FM'd ones. Still with a bit of patience you can make very good FSK units by FM'ing them..

--

Chuck Hast
wchast@utilpart.com

kp4djt

66. Re: [NETSIG:3033] Re: Mods for 2mtr. Mitrek

From: KS9K Paul Hellenberg <paulh@truline.com>
Date: Thu, 5 Dec 1996 14:15:16 -0600 (CST)
To: netsig@tapr.org
Message-ID: <199612052015.0AA14945@sparc5.truline.com>
Rendered body type: text/plain
t get BACK to it.
>
>If you have some Micor base stations around they make very good digital
>repeaters, of course the voice types know this too 8-
>

Hi I am looking for Motorola radios do you have a source????????

Paul
KS9K@contesting.com or
Paul Hellenberg paulh@truline.com
Tru Line Lithograhing Inc. 414 554 7300 X125

67. Re: [NETSIG:3031] Re: 9600 backbone radios

From: KS9K Paul Hellenberg <paulh@truline.com>
Date: Thu, 5 Dec 1996 14:51:42 -0600 (CST)
To: netsig@tapr.org
Message-ID: <199612052051.0AA15040@sparc5.truline.com>
Rendered body type: text/plain
Hi Dave

Do you have any source for radios ???? Paul

> I have a couple of Mocom 70's, but have not taken the time to evaluate
>them for operation at 9600. Take a look at the manual. If there's a CTCSS,
>PL, or DCS input directly to an FM modulator, you're in luck and the tx will
>be an easy mod. In the receiver, you might have to remove a filter or two
>in the IF to flatten out the receiver passband.
>
> Even though the UHF Micors that we use have an FM modulator, the
>2-meter Micor DOES NOT. (We all know what assume spells :-)
>
> 73,
>
> Dave
>
>-----
>Dave Maciorowski, WA1JHK
>Colorado Repeater Association, Inc.
> Serving Colorado with Voice and Data, 6-Meters to 1.2 Gig
>
>Internet: waljkh@ix.netcom.com or waljkh@amsat.org
>CRA: http://www.rmsd.com/hamradio/cra/
>
>
KS9K@contesting.com or
Paul Hellenberg paulh@truline.com
Tru Line Lithograhing Inc. 414 554 7300 X125

68. Re: [NETSIG:3030] Re: Inverters and UPS's

From: Jeff King <jeff@mich.com>
Date: Sat, 07 Dec 1996 18:25:09 -0500
To: netsig@tapr.org
Cc: waljkh@ix.netcom.com
Message-ID: <2.2.32.19961207232509.006e6e5c@mich.com>
Rendered body type: text/plain
At 10:44 AM 12/5/96 -0600, Dave Maciorowski wrote:

> It's hard to believe that there isn't a ham around that's a power
>supply designer that would design an appropriate power supply for a PC that
>runs on 11-15 VDC.

Right now I'm designing a PC/104 supply that will take 9-35 volts in
and convert it to the proper voltages for this bus. If you think there
is a market, I could add PCB holes for a ISA/PCI power supply connector.

> What's an "appropriate" supply? 11-15VDC in (gotta handle batteries
>down to 11), outs at +5@20A, +12@8A, -12@.5. (Does anybody really use the
>-5 anymore?) It should really be a switcher (WITH filtering!) for
>efficiency, cool operation, and the regeneration of the +12 from only 11V
>in.

You really think you need that much current on the 5V line? I was planning
on doing about ~10A. Also, why so much current on the 12Volt line? The
design was going to be a switcher. BTW, its really trivial to design one
of these things today..... check out a MAXIM catalog.

Note the supply I am design is NOT isolated from the power in. The ground
line is common. It is for a vehicluar application, so this is not a
issue. Most (all) standard 110vac PC supplies are isolated from the mains.

>The power supply could also contain a watchdog

You mean something external (a TTL line in and out) or something
that would sit on the bus? It would be easy with the PC/104 design,
you just give it a address on the bus and have it control the reset
line. With a external design I'd imagine you'd just have a line to 'twiddle'
every so often and have it control a contact closure for the 'reset'.

>and a
>low-voltage sensor for graceful shutdown and restart.

Again, this would need to be defined. I imagine you want to set a
trip point for the battery in voltage? As an example, assuming your
switcher will work till 9vdc, you'd set the switch point at 10.5volt
to alert the PC to shutdown. The 'external version' could again just
have a contact closure and the PC/104 version could have the information
available on the bus.

>
> Any takers?
>
> 73,
>
> Dave

73

-Jeff wb8wka

69. Re: [NETSIG:3038] Re: Inverters and UPS's

From: Chuck Hast <wchast@utilpart.com>
Date: Mon, 09 Dec 1996 15:57:20 -0500
To: netsig@tapr.org
Message-ID: <32AC7D30.4029@utilpart.com>
Rendered body type: text/plain

Jeff King wrote:

>
> At 10:44 AM 12/5/96 -0600, Dave Maciorowski wrote:
>
> > It's hard to believe that there isn't a ham around that's a power
> >supply designer that would design an appropriate power supply for a PC that
> >runs on 11-15 VDC.
>
> Right now I'm designing a PC/104 supply that will take 9-35 volts in
> and convert it to the proper voltages for this bus. If you think there
> is a market, I could add PCB holes for a ISA/PCI power supply connector.
>
> > What's an "appropriate" supply? 11-15VDC in (gotta handle batteries
> >down to 11), outs at +5@20A, +12@8A, -12@.5. (Does anybody really use the
> >-5 anymore?) It should really be a switcher (WITH filtering!) for
> >efficiency, cool operation, and the regeneration of the +12 from only 11V
> >in.
>

> You really think you need that much current on the 5V line? I was planning
> on doing about ~10A. Also, why so much current on the 12Volt line? The
> design was going to be a switcher. BTW, its really trivial to design one
> of these things today..... check out a MAXIM catalog.
>
> Note the supply I am design is NOT isolated from the power in. The ground
> line is common. It is for a vehiclular application, so this is not a
> issue. Most (all) standard 110vac PC supplies are isolated from the mains.
>
> >The power supply could also contain a watchdog
>
> You mean something external (a TTL line in and out) or something
> that would sit on the bus? It would be easy with the PC/104 design,
> you just give it a address on the bus and have it control the reset
> line. With a external design I'd imagine you'd just have a line to 'twiddle'
> every so often and have it control a contact closure for the 'reset'.
>
> >and a
> >low-voltage sensor for graceful shutdown and restart.
>
> Again, this would need to be defined. I imagine you want to set a
> trip point for the battery in voltage? As an example, assuming your
> switcher will work till 9vdc, you'd set the switch point at 10.5volt
> to alert the PC to shutdown. The 'external version' could again just
> have a contact closure and the PC/104 version could have the information
> available on the bus.
>
> >
> > Any takers?
> >
> > 73,
> >
> > Dave
>
> 73
>
> -Jeff wb8wka
What is the cost diff between the 11-15v input and the 9-35v input.
There
is a lot of 24 and 32v systems out there that could benefit from the
greater intput voltage variation.

Rest looks good to me.
--
Chuck Hast
wchast@utilpart.com

kp4djt

70. Re: [NETSIG:3020] As long as we are talking radios...

From: John Ackermann AG9V <jra@febo.com>
Date: Tue, 24 Dec 1996 17:06:32 -0500
To: netsig@tapr.org
Message-ID: <199612242206.RAA29543@meow.febo.com>
Rendered body type: text/plain

I know quite a few people who've used Mitreks as voice repeaters without any trouble. I've heard about the noise problem that Orv mentioned, but I recall hearing that this was a symptom in radios that had had a lot of physical beating -- fractured solder joints in the helical resonators could cause problems.

I've been playing with one here (on UHF) and on the bench don't see any internal desense at all when the TX is into a dummy load and the RX is from a service monitor.

A couple of comments about the Micors:

1. The UHF finals a) are incredibly inefficient, and b) it's impossible to find replacement transistors. They're an early attempt at a solid-state UHF amplifier, and it shows.
2. As a result of the above, you need to run the radios at something below their rated power, but not too much below, as the efficiency goes down and the device dissipation can actually increase. Fans are a big help.
3. The UHF Micors use a single crystal per channel, and an offset crystal for the TX. If the offset is backwards from what you need, you need to to some mods to get it turned around.

All that said, we've been running an old Micor 45 watt radio on our UHF voice

repeater for a couple of years without any problems.

73,

John

> Does anyone have any experience on using Motorola Mitrek and Micor radios
> as voice repeaters. This information would probably be handy for packet
> nodes as well.
> Now that's obvious that both work fine.
> What I am looking for is if you had a choice to do it correctly. I have
> both available and the cost is similar. The 35 to 45 watt models are the
> range I am looking for.
>
> Which would be the choice and why?

> Thanks in advance for everyone's help.
>
> Marvin - WB6PKK

71. Re: [NETSIG:3040] Re: As long as we are talking radios...

From: Chuck Hast <wchast@utilpart.com>
Date: Thu, 26 Dec 1996 09:34:19 -0500
To: netsig@tapr.org
Message-ID: <32C28CEB.36DD@utilpart.com>
Rendered body type: text/plain

John Ackermann AG9V wrote:

>
> I know quite a few people who've used Mitreks as voice repeaters without any
> trouble. I've heard about the noise problem that Orv mentioned, but I recall
> hearing that this was a symptom in radios that had had a lot of physical
> beating -- fractured solder joints in the helical resonators could cause
> problems.
>
> I've been playing with one here (on UHF) and on the bench don't see any
> internal desense at all when the TX is into a dummy load and the RX is
> from a service monitor.
>
> A couple of comments about the Micors:
>
> 1. The UHF finals a) are incredibly inefficient, and b) it's impossible
> to find replacement transistors. They're an early attempt at a solid-state
> UHF amplifier, and it shows.
>
> 2. As a result of the above, you need to run the radios at something below
> their rated power, but not too much below, as the efficiency goes down and the
> device dissipation can actually increase. Fans are a big help.
>
> 3. The UHF Micors use a single crystal per channel, and an offset crystal for
> the TX. If the offset is backwards from what you need, you need to to some
> mods to get it turned around.
>
> All that said, we've been running an old Micor 45 watt radio on our UHF voice
> repeater for a couple of years without any problems.
>
> 73,
> John

John:

Your obs pretty well follow what I encountered at a customer site. A bit
of info on
it here;

The customer is a utility which wanted to use it's low band radio system
to carry
data. I did testing on it and found that 90% of the radios would do 9k6
with no
problem whatsoever. All the remote base sites are Micors, which were
very easy to
mod. Though these things were not running as repeaters, I think that it
was
interesting to note that 9k6 data worked quite well on these radios. The
mobile
units were mitreks which too were quite easy to modify for data, but we
encounter
operational problems and noise problems from many units due to vibration
damage,
and after testing several units the customer replaced all the mobiles
with Maxtracs.

This is a combined voice data system and uses subaudible tone to open squelch for voice. Since the 9k6 data can not carry the PL tone at the same time, the voice users do not hear the data unless the mic is off hook. -- there were some complaints by the snoops out there, but the response was "put your mic on hook and shut up" --

The data will hold off in the presence of voice since the controller looks at the PL active line on the radio and when it sees a good PL tone it holds off until the channel is clear. Same goes for voice, PTT is inhibited if there is data on channel since data tx time is very short many times a voice user will hit ptt and not even realize that he was held off a short time by data.

The Micors do very good data, giving a text book eye pattern. The customer even had a couple of 300 watt units which we also added data to, even though I was worried that the relays would not switch fast enough, but that was unfounded, those units switched in less than 70ms!! Not only that but the 9k6 data was receivable within a 40 mile radius of the base with no problem whatsoever, that was as far as we drove in the testing, and we still were receiving data just fine. We could not GET back though, but we had expected that as the mobiles were only 110 watts into a short mobile antenna. We were able to get back into any base that was no more than 20 miles distant, that gave us 100% coverage through at least one tower, and in many cases there were at least 3 towers within 20 miles of any mobile.

--

Chuck Hast
wchast@utilpart.com

kp4djt

72. K-Net Node ?

From: "James C. Brost" <jimbo@easyway.net>
Date: Mon, 30 Dec 1996 01:51:04 -0500
To: netsig@tapr.org
Message-ID: <v03010d01aeeed10592cb7@[166.84.203.100]>
Rendered body type: text/plain

Anyone using the Kantronics K-Net Node in a KPC-3?

I have 2 questions on settings.

If I set;

MINQUAL 50 (Minimum quality required to add a node)
NODESINT 15 (Minutes between node broadcasts)
OBSINIT 5 (Initial obsolescence count)
OBSMIN 6 (Minimum obsolescence count)

then I should only broadcast myself, once every 15 min. However, this works as if OBSMIN was set to 0 instead, and all nodes in my list are sent out with each broadcast. The docs say (n = 0 - 255), however 127 is the highest value accepted. Also, there is no second "MINQUAL to broadcast". Anyone else had this problem?

Also, since PACLEN command is set in the TNC command mode, and not in the NODE, should PACLEN be 236, or 256 for maximum throughput without Netrom fragmentation?

--

mailto:jimbo@easyway.net
<http://www.easyway.net/~jimbo>

73. Re: [NETSIG:3042] K-Net Node ?

From: "Karl F. Larsen" <k5di@acca.nmsu.edu>
Date: Mon, 30 Dec 1996 07:21:13 -0700 (MST)
To: netsig@tapr.org
Message-ID: <199612301421.HAA03551@acca.nmsu.edu>
Rendered body type: text/plain

At 12:52 AM 12/30/96 -0600, you wrote:
>Anyone using the Kantronics K-Net Node in a KPC-3?
>
>I have 2 questions on settings.
>
>If I set;
>
>MINQUAL 50 (Minimum quality required to add a node)
>NODESINT 15 (Minutes between node broadcasts)
>

>OBSINIT 5 (Initial obsolescence count)
>OBSMIN 6 (Minimum obsolescence count)
>
>Make obsinit 6 and obsmin 3 and try it again. It might work.

>then I should only broadcast myself, once every 15 min.
>However, this works as if OBSMIN was set to 0 instead, and
>all nodes in my list are sent out with each broadcast. The docs say
>(n = 0 - 255), however 127 is the highest value accepted. Also, there is no
>second "MINQUAL to broadcast". Anyone else had this problem?
>
>Also, since PACLEN command is set in the TNC command mode, and not in the
>NODE, should PACLEN be 236, or 256 for maximum throughput without Netrom
>fragmentation?
>
>
>---
>
>mailto:jimbo@easyway.net
>http://www.easyway.net/~jimbo
>
>
>
73, de Karl aka k5di

Karl F. Larsen Box 74, Mesilla Park, NM 88047 (505) 524-3303
k5di@k5di.cruces.nm.usa.noam k5di@acca.nmsu.edu k5di@juno.com

74. Re: [NETSIG:3043] Re: K-Net Node ?

From: "James C. Brost" <jimbo@easyway.net>
Date: Mon, 30 Dec 1996 22:08:27 -0500
To: netsig@tapr.org
Message-ID: <v03010d00aeee09f44094@[207.10.81.43]>
Rendered body type: text/plain

>At 12:52 AM 12/30/96 -0600, you wrote:
>>Anyone using the Kantronics K-Net Node in a KPC-3?
>>
>>I have 2 questions on settings.
>>
>>If I set;
>>
>>MINQUAL 50 (Minimum quality required to add a node)
>>NODESINT 15 (Minutes between node broadcasts)
>>OBSINIT 5 (Initial obsolescence count)
>>OBSMIN 6 (Minimum obsolescence count)
>>
>Make obsinit 6 and obsmin 3 and try it again. It might work.

Actually not, if obsinit is greater then obsmin, it will broadcast the node until it drops below obsmin, as it should. If obsmin is (obsinit + 1), then it should never broadcast a node received from the radio, since 5 is less than 6. While this works with X1J and BPQ, K-Net acts as if OBSMIN was 0 and will broadcast the node till the OBS count reaches 0.

>>then I should only broadcast myself, once every 15 min.
>>However, this works as if OBSMIN was set to 0 instead, and
>>all nodes in my list are sent out with each broadcast. The docs say
>>(n = 0 - 255), however 127 is the highest value accepted. Also, there is no
>>second "MINQUAL to broadcast". Anyone else had this problem?
>>
>>Also, since PACLEN command is set in the TNC command mode, and not in the
>>NODE, should PACLEN be 236, or 256 for maximum throughput without Netrom
>>fragmentation?

--

<mailto:jimbo@easyway.net>
<http://www.easyway.net/~jimbo>

January 1997

Original source file: netsig.9701

Source: http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.9701

1. remote sysop bpq node

From: "Rex H. Ishmael" <rishmael@texhoma.net>
Date: Sat, 4 Jan 1997 12:42:59 -0600 (CST)
To: netsig@tapr.org
Message-ID: <1.5.4.16.19970104133632.2217d95c@texhoma.net>
Rendered body type: text/plain

Any one remote sysop their bpq node?.. if so have you been able to add routes remotely?.. all I have been able to do is set quality on a route already in.. if you can add a route (with a digi) how is it done via remote access..?

REX

=====
Rex Ishmael, Sr. Environmental Engineer, Halliburton Energy Services
E-Mail:rishmael@halnet.com (work)
E-Mail:rishmael@texhoma.net (home)
Amatuer Mail: WD0AJG@WD0AJG.#SCOK.OK.USA.NOAM
=====

2. Re: [NETSIG:3045] remote sysop bpq node

From: David Wolf <wo5h@tapr.org>
Date: Sat, 04 Jan 1997 22:42:11 -0600
To: netsig@tapr.org
Message-ID: <32CF3123.776D@tapr.org>
Rendered body type: text/plain

Rex:

I think Ronnie Franklin WD5GIC remotely sysops his.

73 de Dave W05H

3. "Advanced" Packet Radio

From: Steve Stroh <strohs@halcyon.com>
Date: Mon, 6 Jan 1997 05:50:35 -0800 (PST)
To: TAPR Networking SIG Mailing List <netsig@tapr.org>
Cc: Gary Coffman KE4ZV <ke4zv@radio.org>
Message-ID: <Pine.ULT.3.95.970106053859.6121H-100000@coho.halcyon.com>
Rendered body type: text/plain

I've been following this thread with interest in the newsgroup rec.radio.amateur.digital.misc.

I'm crossposting this to the TAPR NetSIG mailing list (which has been a bit quiet over the holidays) because Gary makes some points that are relevant to the NetSIG "audience". His comments resonate with me particularly since the Amateur system I'm most involved with- Puget Sound Amateur Radio TCP/IP Network (WetNet) in the Seattle, Washington, USA area is mostly 9600 baud repeater and TCP/IP based. We decided that Net/ROM, BBS', and 1200 baud (other than selected use by packet beginners) were dead ends.

Gary's is very right that it's a LOT more fun to just go off and do stuff that is a bit tough- TCP/IP, 9600 baud, 19.2, etc. We're trying to gather ourselves enough to seriously consider doing a 56K repeater in the near future, as well as being involved in the TAPR Spread Spectrum STA.

Steve N8GNJ
TAPR NetSIG chairperson

--

Steve Stroh Woodinville, Washington, USA strohs@halcyon.com

----- Forwarded message -----

Date: Sun, 5 Jan 1997 20:18:03 GMT
From: Gary Coffman <gary@ke4zv.atl.ga.us>
Newsgroups: rec.radio.amateur.digital.misc
Subject: Re: Kansas City Packet---What happened?

In article <32CDCD4F.1894@viroqua.wi.frontiercomm.net> rwilliam <rwilliam@viroqua.wi.frontiercomm.net> writes:

>Sean R Stepanek wrote:
>>

>> It seems that everybody has gone to the internet around here also. I
>> run the local BBS and had to alert the node op (who hasn't been on
>> packet for a long time) that his node needed maintance. They funny
>> thing is that ALL of MINNESOTA has been cut off from the internet more
>> then once. It is a shame, I try my best to encourage and assist
>> others with BBS's and NODES, even maintain my own node, but time
>> is so limited for me.
>> If what you say is true, (but I dont know if it is that way in our area
>since I completely dropped out of packet several years ago), I would
>figure that things have peaked and dropped off as things became obsolete
>for many. A few of us who tried to get some activity going a number of
>years ago for "high" speed 9,600 baud packet got nowhere with the
>entrenched bbs op and his friends who opposed any new ideas and were
>particularly resistant to tying the internet to packet to make packet a
>fantastically useful message system for a lot of folks.
>
>Those of us who realized what could happen were made to understand that
>our ideas were not welcome. And even when I made a presentation at a
>small regional meeting about 9k6 and internet connectivity and new
>directions, most members felt that this was too expensive for them and
>the power structure asked me to never bring up heresy like this. They
>opposed ARRL QST articles and certainly TAPR on any of these new
>directions. So now I have my "radio" on the internet which takes up 90%
>of my operating time and I bet a few other folks are in the same
>situation. And I am actually enjoying it more.
>
>Rick, KV9U

You've put your finger on one of the two major reasons for packet
radio's stagnation and decline, and indeed the major reason for
amateur radio's stagnation and decline. The cost excuse is really a
red herring. The cost differential between any of the various speed
systems we have today is insignificant at the system level, and the
faster systems are actually cheaper per bit. It is fear of change,
or more properly, fear of failure to be able to adapt to change,
which is holding back faster packet and/or more advanced networking
methods.

Some of those running the current systems are afraid that they
will lose their guru status if things change. They are afraid
that they won't be able to understand the modulations or protocols
of better systems, and afraid that they'll have to open the covers
of their radios, and fail to understand them as well. In short,
they not only fear that their equipment will become obsolete, but
that *they* will become obsolete.

This is a sad commentary on what has become of amateur radio,
but it is pervasive throughout today's amateur radio. Every
progressive change has been opposed by those fearing that they
won't be able to adapt (they'll throw up smokescreens to hide
behind, but this is the real motivation). This is entirely
contrary to the true spirit of amateur radio. As the amateur's
code says, "The amateur is progressive", but too few are today.
Amateur radio is supposed to be a continuing learning experience,
but too many amateurs want to rest on their laurels and freeze
things at the level of *their* current expertise.

We should of course try to dispell these fears, show the
opponents of change that they *can* understand the newer
methods, sell them on the advantages of the newer ways.
But if that fails, we must *go around* them. We must push
on regardless of what the old guard wants to do. That's
a hard road. It is especially a hard road in packet, which
is inherently a cooperative enterprise. But it may be the
only road we can take, unless we just throw up our hands
and switch to the wired network and become dependent on
commercial providers outside of our control for all our
communications.

If we do that, it will spell the end of amateur radio as
anything but a glorified CB service populated by *users*
who have no desire to learn or improve how things work.
The only constant in the world is change, and if we fail
to evolve with those changes, or indeed if we fail to lead
those changes, we are doomed to be sloughed off as vestigial
and maladaptive parts of the communications world.

Besides, experimenting with new ideas is *fun*. It is Man
at his creative best. It is an incredible rush to suddenly

have a new insight burst forth in your awareness. It is a huge kick to see your idea come to life on the bench, to see it spread its wings and move out into the world. There's nothing else in the world like it.

Gary

```
--
Gary Coffman KE4ZV          | You make it,      | Due to provider problems
Destructive Testing Systems | we break it.     | with previous uucp addresses
534 Shannon Way           | Guaranteed!      | Email to ke4zv@radio.org
Lawrenceville, GA 30244   |                   |
```

4. Re: [NETSIG:3045] remote sysop bpq node

From: lz4kk@ait.ru.acad.bg
Date: Mon, 6 Jan 1997 22:20:04 +0000
To: netsig@tapr.org
Message-ID: <199701062022.WAA01867@sting.ait.ru.acad.bg>
Rendered body type: text/plain

```
> Any one remote sysop their bpq node?.. if so have you been able to
> add routes remotely?.. all I have been able to do is set quality on a
> route already in.. if you can add a route (with a digi ) how is it done
> via remote access..?
> REX
> =====
```

Hi Rex,

I do remotely sysop my BPQ Node for about 1 year (running sysop/resident as a TSR).

I don't know a way to lock a route to a node via another node (existing or not) or by a simple digi..You can add routes using ROUTES command, but this takes effect only after a Node broadcast is heard from this node directly. If no broadcast heard, "C LOCKEDNODE" command initialises a L2 connection, not L4 Net/Rom link.

QUESTION to all BPQ users:

- Is there a way to set DIFFERENT MAXFRAME values for different locked routes? I need the following:
 - some locked routes to neighbour nodes to have MAXFRAME=1 (forwarding via these nodes with maxframe >1 is a problem)
 - Direct (L2) connections to my node to have Maxframe=2 or 3 (for local users maxframe=1 is too slow on 1200bps :-)
- And the service for the local users is much more important compared to endless BBS forwarding HI) There's usually no more than 1-2 local users at the same time, so big MAXFRAME is not a problem.

I am running FBB 5.15c on the same PC, TNC in BPQ polled KISS mode. It seems to me it is not possible to use the BPQ switch with different MAXFRAME for different users at one and the same time?

ANOTHER QUESTION:

- how to PREVENT re-establishing the L4 link via another routes after a link break? Example - I have a locked route to a Node1, quality 192. I have false (or very bad and unreliable) routes to this node via Node2, Node3 etc..., quality 144 and less. After breaking the link with Node1 (retry counter exceeded because of a temporary QRM), the link continues via Node2, causing much more QRM, because my link to Node2 is much worse in fact..

and LAST question :-)

I can monitor the following:

- when I am forwarding to another BBS (direct path, also BPQ/FBB), because of the weak signals and much QRM, my BBS sends 4-5 packets of continuously following data packets (with many retries)
- suddenly my BBS sends a packet preceeding these 4-5, and begins retransmitting these already sent (or at least I think so HI) packets AGAIN!
- this happens sometime very often, resulting endless loops and QRM..

MY SOLUTION - I have forced L2 connection to all my forwarding partners, calling the NODEALIAS-SSID, this way forcing L2 connections. No more "back in time" retransmissions, as result the forwarding is much faster!

Does anyone has the same problems and any better solutions? Will help me replacing the KISS TNC with X1J node attached to the BPQ? Soon I will set second port for local access, I need UNPROTO FBB lists to be sent out (and TPK/TSTHOST requests

to be accepted) on at least one port. Can I do this via X1J TNC's?
The system runs unattended on the highest place available in the town
- the local TV-tower. There are often problems with the power supply
voltage drops, lightings, etc.. and TNC's in KISS mode have proved to be
to most reliable solution. I have set watchdog timers at both the
PC and the home-made TNCs and they hit sometime quite often..
The system is supported by the members of Students Radio Club at the
Tehcnical University in Russe LZ2KIM.

Seasonon's greetings to all!

73! de Krassi, LZ4KK @ LZ2KIM.BGR.EU
lz4kk@ait.ru.acad.bg

5. Re: [NETSIG:3047] PBBS BIDS

From: Robert <w5robert@blkbox.COM>
Date: Tue, 7 Jan 1997 19:23:20 -0600 (CST)
To: netsig@tapr.org
Message-ID: <9701071923.aa23791@blkbox.COM>
Rendered body type: text/plain

I would like a good writeup on PBBS Bids to give to
on4un OR if someone could explain it to him.
He's on PBBS awaiting input.

--
73 Robert W5AJ w5robert@blkbox.com

6. Re: [NETSIG:3049] Re: PBBS BIDS

From: Arthur J Martin <amartin@world2u.com>
Date: Tue, 7 Jan 1997 23:27:55 -0500 (EST)
To: netsig@tapr.org
Message-ID: <199701080427.XAA24261@ants3.world2u.com>
Rendered body type: text/plain

Hi, Robert...

At 07:29 PM 1/7/97 -0600, you wrote:
>I would like a good writeup on PBBS Bids to give to
>on4un OR if someone could explain it to him.
>He's on PBBS awaiting input.
>
>--
>73 Robert W5AJ w5robert@blkbox.com
>

Sent you a copy of a FAQ I made up based on input from Hank, W0RLI. Hope you
can make use of it.

Regards for the New Year and stay well.

73 de Art N2QAE

< Art Martin >
< e-mail: amartin@world2u.com >
< AX.25: N2QAE@N2QAE.#NNJ.NJ.USA.NA >

7. Re: [NETSIG:3047] "Advanced" Packet Radio

From: "Charles Brabham" <n5pvl@texoma.net>
Date: Wed, 8 Jan 1997 03:04:44 -0600
To: <netsig@tapr.org>
Message-ID: <199701080903.DAA05157@mail.texoma.net>
Rendered body type: text/plain

Re: Steve Stroh's recent posting # 3047.... " Advanced" Packet Radio...

Didn't all of that whining stuff sound a bit silly to you, Steve?

Everybody knows that 2m takes a poor backseat to 440 Mhz or higher for any
sort of serious high-speed packet work. All of this " Gee, I'm held back
because the 2m/1.2kb folks are doing something different" stuff is just a
rather common, rather poor excuse for not accomplishing anything.

Blame it on the mainstream packet folks. Right.

Fact is; There is plenty of room for people who want to play with HS Packet

do anything they want to. The bands which are best for that purpose are barely used by the 2m, 1.2kb folks, and everybody knows it. Most of this sort of whining is more an expression of elitism, and parroting of questionable "conventional wisdom" than anything else.

In a SIG covering Networking issues it is particularly out of place. Let's stay on topic, please.

73 DE Charles Brabham, N5PVL
Packet Radio : N5PVL @ N5PVL.#NTX.TX.USA.NOAM
E-Mail : n5pvl@texoma.com
Web : <http://www.texoma.com/~n5pvl>

8. Re: Advanced Packet Radio

From: "Steve Sampson" <ssampson@oklahoma.net>
Date: Wed, 8 Jan 1997 07:14:46 -0600
To: <netsig@tapr.org>
Cc: <n5pvl@texoma.net>
Message-ID: <199701081314.HAA01996@gate.mdd.net>
Rendered body type: text/plain

> From: "Charles Brabham" <n5pvl@texoma.net>
>
> Didn't all of that whining stuff sound a bit silly to you...

very nice comment Charles. But whining is a two way street.

> Everybody knows that 2m takes a poor backseat to 440 Mhz or higher for any
> sort of serious high-speed packet work. All of this " Gee, I'm held back
> because the 2m/1.2kb folks are doing something different" stuff is just a
> rather common, rather poor excuse for not accomplishing anything.

I think you missed the point. While I guess the comments about current packet radio were meant to show the authors frustration and surprise, I don't think you can point a finger at the carrier frequency as the basis for current usage.

I agree the author, who is usually well written in the cesspool of rec.radio.amateur, has a severe case of tunnel vision, I wouldn't just write it off as whining. By doing so, you minimize the authors worth, and contribute nothing. By tunnel vision, I mean: the author fails to take into consideration, that more than half of all licensed Hams could care less about packet, and even a less number, about networking. It is not because it's backwards, low-tech, or anything of the sort. I know a new Ham who likes building one transistor oscillators. I can say he probably knows more about oscillators than the one month I spent in Tech-School studying them from a book. Would an ATV enthusiast care anything about "networking?" etc., etc.

So I would say the article ignores a basic fact that networking is a very minor hobby within the hobby. It means nothing to the FCC or the American public, whether Hams can network, or not network.

> Fact is; There is plenty of room for people who want to play with HS Packet
> do anything they want to.

It's not just high speed. For example here in Oklahoma we send SMTP mail via 9600 Rose using compressed sockets. It's merely data, just like keyboard chat is. But to show an example of what the author was talking about, is that there are many folks who do not want this data to flow. It is against what they believe in. While in our case we can ignore them, because they don't own the equipment, it is a major problem for people who try to use a system and are refused access. Even if they paid money and donated equipment, they would be denied access. Some "data" are not welcome. Some "data" is better than other "data." I think that was the authors other major argument.

> Most of this sort of whining is more an expression of elitism, and
> parroting of questionable "conventional wisdom" than anything else.

Oh boy. I'll just say that you are wrong, and leave it at that.

Steve, n5owk

9. Article in Linux Journal

From: Bob Nielsen <nielsen@primenet.com>
Date: Sun, 12 Jan 1997 22:15:04 -0700 (MST)
To: tcpaz@azgate.nj7p.ampr.org, netsig@tapr.org
Message-ID: <Pine.LNX.3.95.970112220507.3855B-100000@nielsen.tus.primenet.com>
Rendered body type: text/plain

The February 1997 issue of Linux Journal has an article by Fred Treasure, keSci on the remote control system for the Western New Mexico University

telescope which uses packet for part of its communication path. Fred talked about this a few years ago at the TAPR annual meeting.

(The publisher of Linux Journal is Phil Hughes, wa6swr.)

Bob

Bob Nielsen	Internet: nielsen@primenet.com
Tucson, AZ	AMPRnet: w6swe@w6swe.ampr.org
	AX.25: w6swe@wb7tls.az.usa.noam
	http://www.primenet.com/~nielsen

10. Tiny-2 MK2 defect

From: Burt Lang <burt@roccler.qc.ca>
Date: Wed, 15 Jan 1997 11:45:06 +0000
Cc: netsig@tapr.org
Message-ID: <32DCC342.5414@roccler.qc.ca>
Rendered body type: text/plain

Hi Folks.

During the repair of a number of PacComm Tiny-2 TNCs that were damaged by lightning, a manufacturing/design defect on the Tiny-2 MK2 model was discovered.

It would appear that EVERY PacComm Tiny-2 MK2 ever made has an electrolytic capacitor installed backwards. C23 is installed with the positive terminal connected to pin 6 on the MAX232. However pin 6 on the MAX232 is the NEGATIVE supply filter and output terminal with a typical voltage of -10v. If this capacitor fails, the charge pump voltage generation circuitry is loaded down and your serial port fails or locks up (or both). The only reason I can see that it has not been noticed before this is that PacComm have been generally using 25 volt electrolytics in this spot and they have been able to tolerate the reverse polarity under most normal circumstances.

The TNCs I was working on ranged from early production units with PCB ver 1.7 (SN 12,xxx) to pretty recent boards with ver 1.81 (SN 18,6xx) which had been stressed with lightning and it was during the troubleshooting procedure that my assistant started to ask why the board and the schematic did not match.

The schematic is correct and the board copper traces are fine if the capacitor is reversed (unless you consider that a square pad denotes the positive terminal). The only mistake the designer made was on the component layout screen printing where the polarity marking was reversed. Of course the board stuffers simply follow the board markings when the components are installed.

PacComm has been already advised by e-mail to their trouble reporting address. I am attaching a copy of the confirmation message received from their automatic server. At the time this message is being composed, I have not received any response from PacComm (I allowed 2 working days before posting this notice).

Recommended action:

This defect poses only a potential failure problem. If your TNC is working, you do not need to immediately change the capacitor. Schedule a change for the next time you have the unit open.

For network/node operators:

Examine your own node stacks when next servicing the node stack and replace C23 with a new unit (no telling what damage the existing unit has suffered with continued application of reversed voltage - although the units we switched around (we did not have replacements readily available) seemed to work reasonably well). The replacement must be installed with the positive terminal in the hole nearest C33 (negative lead in the hole marked +). A dipped tantalum cap might be a better replacement.

Note: Some of the problems that I reported some years ago regarding low drive and lockup of the serial ports with certain brands of serial port ICs may have in fact been aggravated by this problem. I know of at least two stacks recently that have suffered similar problems with lockups.

Let's not dump on PacComm on this issue. Even the best manufacturers

can have errors slip thru their design and testing procedure. We don't want another AEA - NetRom compatible TNCs are getting hard enough to find and we don't want a monopoly by one remaining manufacturer. What we should expect from a responsible company is correction of their current production ASAP and a timely advisory notice to owners outlining the problem and how it can be corrected.

Any Comments???

Burt>>>

(response from PacComm trouble report server)

Subject: Receipt confirmation of Hardware Report 1071
Date: Sun,12 Jan 97 11:00:47 EST
From: reporter@paccomm.com
To: burt@roccler.qc.ca

Number: PR-1071

SUBMITTER:

Name: Burt Lang
Callsign: VE2BMQ
Phone: (514)825-2597
FAX:
REPLY E-MAIL: burt@roccler.qc.ca

Product: Tiny-2 Mk-2
Release: rev 1.7 & 1.81
Date:

SYNOPSIS:

Manufacturing/design defect in Tiny-2 MK2

DESCRIPTION:

You have a serious problem

Electrolytic capacitor C23 is installed with incorrect polarity on all Tiny-2 MK2 boards I have examined. The error is in the component marking screen printing on the board which obviously the installers used when orienting the parts on the board.

If you examine the board very carefully, you will find that the positive terminal of C23 goes to pin 6 on the MAX232 chip. However pin 6 on the MAX232 is the NEGATIVE polarity power supply filter point and output terminal and requires connection to the negative terminal of the capacitor.

The schematic is correct as is the copper traces on the board.

The problems arise when this capacitor starts to leak excessively and loads down the power supply circuitry in the MAX232. The serial port will then fail and may also lock up.

How come this was not noticed before this? Well probably because you have been using 25 volt units (instead of the 10v units specified in the schematic) and they tolerated reverse polarity at least long enough for the units to past inspection and during normal operation in the field. Users probably attributed occasional failures to other causes.

Recommended correction (on units already out in the field): Replace this capacitor with a new one installed with the polarity reversed to that shown on the board screening. I do not expect you to offer to correct them but I would expect you to issue an advisory notice to owners to warn them of the problem. I would also expect you to correct your production on future units asap.

Again I must emphasize that you generally make good products but bugs can be hidden in even the best of equipment.

HOW TO REPEAT PROBLEM:

Thank you for your interest in PacComm products.

PacComm

11. X.25 ?

From: Robert <w5robert@blkbox.COM>
Date: Wed, 15 Jan 1997 23:33:10 -0600 (CST)
To: netsig@tapr.org
Message-ID: <9701152333.aa17894@blkbox.COM>
Rendered body type: text/plain

Can someone inform me / group of differences in X.25 and AX.25 ??

--

73 Robert W5AJ w5robert@blkbox.com

12. Re: [NETSIG:3055] X.25 ?

From: Boyd Prestwood <w2hob@mosquito.com>
Date: Thu, 16 Jan 1997 01:44:06 -0500 (EST)
To: netsig@tapr.org
Message-ID: <199701160644.BAA15931@itchy.mosquito.com>
Rendered body type: text/plain

At 23:37 1/15/97 -0600, you wrote:

>Can someone inform me / group of differences in X.25 and AX.25 ??

>--

>73 Robert W5AJ w5robert@blkbox.com

W2HOB REPLY: AX.25 is the amateur radio version of the Level-2 networking protocol X.25 used in the wireline packet networks. AX.25 contains ham radio stuff like callsigns addressing, digipeaters, PTT control etc that would not be applicable in the telephone networks.

Have fun es 73 de Boyd
w2hob@mosquito.com

13. MFJ 220MHZ Radios

From: Thomas I Mathewson <tommath@norwich.net>
Date: Fri, 17 Jan 1997 14:49:09 -0800
To: netsig@tapr.org
Message-ID: <32E001E5.42CC@norwich.net>
Rendered body type: text/plain

Hello All on the SIG!

Have a question: Are the MFJ 220mhz rigs worth buying for packet link radios? Can someone give me any answers? I would like to use 9K6 for speed.

73 Tom

14. TNC3 / FlexNet ?

From: "Charles Brabham" <n5pvl@texoma.net>
Date: Fri, 17 Jan 1997 12:31:51 -0600
To: <netsig@tapr.org>

Message-ID: <199701171825.MAA00262@mail.texoma.net>
Rendered body type: text/plain

The upcoming TNC3 sounds nice! Is there a chance that it may be usable for stand-alone FlexNet nodes at remote locations?

73 DE Charles Brabham, N5PVL
Packet Radio : N5PVL @ N5PVL.#NTX.TX.USA.NOAM
E-Mail : n5pvl@texoma.com
Web : <http://www.texoma.com/~n5pvl>

15. RE: Tiny two MK - 2 Capacitor C 23 Question

From: Gwyn Reedy <gwyn@paccomm.com>
Date: Fri, 17 Jan 1997 13:54:13 -0500
To: "'Brian Boccardi'" <n2mpm@worldnet.att.net>
Cc: "'HFSIG'" <hfsig@tapr.org>, "'APRSSIG'" <aprssig@tapr.ofrg>, "'NETSIG'"
<netsig@tapr.org>, "'BBSSIG'" <bbssig@tapr.org>, "'Bitbucket'"
<bitbucket@primerenet.com>, "'Ham-Tech'"
<owner-ham-tech@majordomo.netcom.com>
Message-ID: <01BC047D.ECF47C80@gwyn>
Rendered body type: text/plain

The report you received is correct. Let me tell you more about which models are affected and what should be done about it.

Amateur radio models affected are the TINY-2 MK-2, TNC-NB96, and IPR-NB96 which all incorporate the TINY-2 circuit board.

The TINY-2 pre-MK-2 version is not affected. Those models use the MAX-231 RS-232 chip. The mismarked capacitor crept into the design when the MK-2 changes were made, which included adding the capability to use the MAX-232 RS-232 chip. (The circuit board accepts either the 232 or 231, but all have been built with the 232).

Another way to identify the boards with the error is to examine the circuit board revision number. Revisions 1.7, 1.8, and 1.81 contain the error. Revisions 1.6 and prior use the MAX-231, and Revisions 1.9, 1.91 and 1.92 have corrected the problem. Some of the final production run of 1.81 boards may have the capacitor correctly installed (the reverse of the board markings) as the problem was identified late in the 1.81 production run as work was done on rev. 1.9. Visual inspection will confirm if this is the case.

This capacitor problem is of the nature of 'you ought to fix it the next time it is in for a major tune-up' and not of the 'park it immediately and tow it to the garage' type. In production we usually install capacitors with a significantly higher working voltage than what is applied to them and they have generally worked just fine in these mismarked boards, even though reversed in polarity. Nothing is going to be damaged if the capacitor is left in backwards, except maybe the capacitor itself. There are no reports of any capacitor explosions or other bad effects.

Repair instructions: Measure the voltage on pin 6 of U2 (MAX232). It should be in the range of 8-10 VDC. Remove C23 and reinstall with the negative lead in the + marked hole. Measure the voltage on pin 6 again. If still within the 8-10 VDC range then C23 was not damaged.

If the pin 6 voltage is out of range either before or after reversing C23, the capacitor should be replaced.

Gwyn Reedy, WIBEL
PacComm Packet Radio Systems

gwyn@paccomm.com
<http://www.paccomm.com>

From: Brian Boccardi[SMTP:n2mpm@worldnet.att.net]
Sent: Thursday, January 16, 1997 1:17 PM
To: techspt@paccomm.com
Subject: Tiny two MK - 2 Capacitor C 23 Question

Hello ,
I am a proud owner of a Tiny-2 Mk2, recently i received information about a possible problem with C23. I have serial no 20427 board rev is 1.81. I was told that c 23 may be in backwards and the polarity mark

on the board is wrong. The tnc is not in use right now but would like to get it back on the air. (A older tiny 2 is standing in for it)

N2MPM
Brian Boccardi
Avid MacAPRS User

16. Re: [NETSIG:3059] RE: Tiny two MK - 2 Capacitor C 23 Question

From: Burt Lang <burt@roccler.qc.ca>
Date: Fri, 17 Jan 1997 18:07:28 +0000
To: netsig@tapr.org
Message-ID: <32DFBFE0.1C09@roccler.qc.ca>
Rendered body type: text/plain

Gwyn Reedy wrote:

>
> The report you received is correct. Let me tell you more about which models
> are affected and what should be done about it.
>
> Amateur radio models affected are the TINY-2 MK-2, TNC-NB96, and IPR-NB96
> which all incorporate the TINY-2 circuit board.
>
<snip>

> Repair instructions: Measure the voltage on pin 6 of U2 (MAX232). It should
> be in the range of 8-10 VDC. Remove C23 and reinstall with the negative
> lead in the + marked hole. Measure the voltage on pin 6 again. If still
> within the 8-10 VDC range then C23 was not damaged.
>
> If the pin 6 voltage is out of range either before or after reversing C23,
> the capacitor should be replaced.
>
> Gwyn Reedy, W1BEL
> PacComm Packet Radio Systems
>
> gwyn@paccomm.com
> http://www.paccomm.com
>
>

Gwyn's test for the bad capacitor is reasonable ONLY IF THE SERIAL PORT IS ADEQUATELY LOADED. If you run the test without anything connected to the serial port, the voltage may well look fine even with a bad capacitor (I can attest to that from personal tests). Before running the voltage test, connect at least a terminal to the serial port. If you are using the TNC in a multi-node nodestack, then you should load it with a 5 or 6 port diode matrix fully loaded with TNCs. Or an equivalent static load if someone can figure out what that load should be.

Burt VE2BMQ

17. Re: [NETSIG:3060] RE: Tiny two MK - 2 Capacitor C 23 Question

From: Mike Curtis <wd6ehr@kaiwan.com>
Date: Fri, 17 Jan 1997 18:18:55 -0800 (PST)
To: netsig@tapr.org
Message-ID: <Pine.SUN.3.95.970117181746.11436A-100000@kaiwan009.kaiwan.com>
Rendered body type: text/plain

On Fri, 17 Jan 1997, Burt Lang wrote:

> Gwyn's test for the bad capacitor is reasonable ONLY IF THE SERIAL PORT
> IS ADEQUATELY LOADED. If you run the test without anything connected to
> the serial port, the voltage may well look fine even with a bad
> capacitor (I can attest to that from personal tests). Before running
> the voltage test, connect at least a terminal to the serial port. If
> you are using the TNC in a multi-node nodestack, then you should load it
> with a 5 or 6 port diode matrix fully loaded with TNCs. Or an
> equivalent static load if someone can figure out what that load should
> be.

Or just bite the bullet and replace it :-)

-- mike

18. Node stack problem

From: "Rex H. Ishmael" <rishmael@texhoma.net>
Date: Sun, 19 Jan 1997 19:36:40 -0600 (CST)
To: netsig@tapr.org
Message-ID: <3.0.1.16.19970119202935.2f5f0468@texhoma.net>
Rendered body type: text/plain

I have a node stack of 4 nodes.. all linked thru a netrix board..
3 are Tiny-2's (2 of which have 10 mhz clocks and one older).. and a spiritII
node version. the node stack has worked for several months just fine..
recently we took the 9600 equipment down and re-aligned it and made a
small modification to the radio.. no work was done to the tnc.. I placed
the tnc back on the node stack and had real problems getting them to all
talk again.. after several days of resetting and checking and all , it
started to
work.. .. it has worked for 4 days and then today the spirit II has shut
down..
it just goes dead.. I have re-checked and a simple power reset will bring
it up but it dies (quits processing, the power led stays on).. within an
hour..
the flicker of the sta light is dimmer than I remember but it appears to work
fine when I reset the power but shortly after it dims and the tnc is dead..?
Anyone else seen this or have ideas on what is wrong..?
I have checked voltages and all appears fine at 12.8 to each tnc..
and each is on a spearate power lead to the power supply..

REX

=====
Rex Ishmael, Sr. Environmental Engineer, Halliburton Energy Services
E-Mail: rishmael@halnet.com (work)
E-Mail: rishmael@texhoma.net (home)
Amatuer Mail: WD0AJG@WD0AJG.#SCOK.OK.USA.NOAM
=====

19. X1J4 IP ROUTING

From: dmeredith@phx-az.ampr.org
Date: Sun, 19 Jan 97 21:12:38 MST
To: netsig@tapr.org
Message-ID: <1711@phx-az.ampr.org>
Rendered body type: text/plain

Hi All,

I am working on a routing problem on a node system with several subnets and have just noticed that I
can not enter more than

10 entries for IP routing...

Is this a limitation of X1J4, or is there a parameter that can be set, or maybe
I'm doing something wrong???

Thanks..

Daniel

20. Re: [NETSIG:3062] Node stack problem

From: "Karl F. Larsen" <k5di@acca.nmsu.edu>
Date: Mon, 20 Jan 1997 04:58:59 -0700 (MST)
To: netsig@tapr.org
Message-ID: <199701201158.EAA10168@acca.nmsu.edu>
Rendered body type: text/plain

You do not say your using the x1j node chips, but it sounds like you are. If
so it can be that the spirit tnc is not in the proper rs-232 mode. If your
not using x1j then you have a hardware fault in the spirit.

At 07:37 PM 1/19/97 -0600, you wrote:

>I have a node stack of 4 nodes.. all linked thru a netrix board..
>3 are Tiny-2's (2 of which have 10 mhz clocks and one older).. and a spiritII
>node version. the node stack has worked for several months just fine..
>recently we took the 9600 equipment down and re-aligned it and made a
>small modification to the radio.. no work was done to the tnc.. I placed
>the tnc back on the node stack and had real problems getting them to all
>talk again.. after several days of resetting and checking and all , it
>started to
>work.. .. it has worked for 4 days and then today the spirit II has shut
>down..
>it just goes dead.. I have re-checked and a simple power reset will bring
>it up but it dies (quits processing, the power led stays on).. within an

>hour..
>the flicker of the sta light is dimmer than I remember but it appears to work
>fine when I reset the power but shortly after it dims and the tnc is dead..?
>Anyone else seen this or have ideas on what is wrong..?
>I have checked voltages and all appears fine at 12.8 to each tnc..
>and each is on a spearate power lead to the power supply..
>
>REX
>
>=====

>Rex Ishmael, Sr. Environmental Engineer, Halliburton Energy Services
>E-Mail: rishmael@halnet.com (work)
>E-Mail: rishmael@texhoma.net (home)
>Amatuer Mail: WD0AJG@WD0AJG.#SCOK.OK.USA.NOAM
>=====

>
>
73, de Karl aka k5di

Karl F. Larsen Box 74, Mesilla Park, NM 88047 (505) 524-3303
k5di@k5di.cruces.nm.usa.noam k5di@acca.nmsu.edu k5di@juno.com

21. Re: [NETSIG:3063] X1J4 IP ROUTING

From: "Karl F. Larsen" <k5di@acca.nmsu.edu>
Date: Mon, 20 Jan 1997 05:04:55 -0700 (MST)
To: netsig@tapr.org
Message-ID: <199701201204.FAA10281@acca.nmsu.edu>
Rendered body type: text/plain

At 10:13 PM 1/19/97 -0600, you wrote:
>Hi All,
> I am working on a routing problem on a node system with several subnets
and have just noticed that I can not enter more than
> 10 entries for IP routing..
>Is this a limitation of X1J4, or is there a parameter that can be set, or maybe
>I'm doing something wrong???

>
>Thanks..
>
>Daniel
>

You have a population problem Dan! Serious you should be able to
handle even Pheonix with 10 IP numbers. Your saying you have more than 10
subnets on 1 x1j. WOW
I'm not aware of a limitation Dan, but I can look and will do so. But my 3
all have like 3 or 4 IP entries and now zero arp entries.

73, de Karl aka k5di

Karl F. Larsen Box 74, Mesilla Park, NM 88047 (505) 524-3303
k5di@k5di.cruces.nm.usa.noam k5di@acca.nmsu.edu k5di@juno.com

22. About Kamplus /KPC2/FBB5

From: michael <golden@palu.wasantara.net.id>
Date: Thu, 11 Jan 1996 11:01:13 +0800
To: netsig@tapr.org
Message-ID: <2.2.32.19960111030113.006787c8@palu.wasantara.net.id>
Rendered body type: text/plain

Hi, All

May somebody give any help about our problem like this,
1.Kamplus go to low sensitive for some minute after is on
2.Where I'll get some product support,mail address.or web about
Kantronics
3.We need web address or mail addres of site of fbb5, fbb7 and auto7
program

Our best regard for All of you for any help ,thank's

From,YB8NA ,SYAM AKIL
YC8PLT,MICHAEL THE

23. Re: [NETSIG:3063] X1J4 IP ROUTING

From: n8ivx@onebellevue.com (Steve Goff)
Date: Mon, 20 Jan 1997 10:29:24 -0500
To: netsig@tapr.org
Message-ID: <2.2.32.19970120152924.006e77e0@[38.249.11.2]>

Rendered body type: text/plain

At 22:13 1/19/97 -0600, you wrote:

>Hi All,
> I am working on a routing problem on a node system with several subnets
and have just noticed that I can not enter more than
> 10 entries for IP routing...
>Is this a limitation of X1J4, or is there a parameter that can be set, or maybe
>I'm doing something wrong???
>
>Thanks..
>
>Daniel
>
>

I can put more than 10 in mine. Maybe you have a bad burn?

73 de Steve
NWOH Coordinator, Ohio Area Repeater Council, Inc.
Packet: N8IVX@N8IVX.#NWOH.OH.USA.NOAM
AmprNet: n8ivx@n8ivx.ampr.org [44.70.177.32]
E-Mail: n8ivx@onebellevue.com
Web: <<http://www.onebellevue.com/n8ivx/>> OR
<<http://38.249.11.2/n8ivx/>>

24. Re: [NETSIG:3066] About Kamplus /KPC2/FBB5

From: Sid Ashen-Brenner <sashen@midusa.net>
Date: Mon, 20 Jan 1997 19:32:13 -0600
To: netsig@tapr.org
Message-ID: <3.0.32.19970120172811.006b413c@midusa.net>
Rendered body type: text/plain

At 07:40 AM 1/20/97 -0600, you wrote:

> Hi, All
>
> May somebody give any help about our problem like this,
> 1.Kamplus go to low sensitive for some minute after is on
> 2.Where I'll get some product support,mail address.or web about
>Kantronics

Kantronics, Inc.
1202 East 23rd Street
Lawrence, Kansas 66046

Service/Tech Support 913-842-4476
FAX 913-842-2021

www.kantronics.com

> 3.We need web address or mail addres of site of fbb5,fbb7 and auto7
> program

Official site : www.f6fbb.org
Site with many "plug-ins" for FBB [ftp.funet.fi/pub/ham/packet/bbs](ftp://funet.fi/pub/ham/packet/bbs)

Sid Ashen-Brenner Salina, Kansas
Internet : sashen@midusa.net
AX-25 : n0obm @ n0obm.#ncks.ks.usa.noam

25. X1J4 IP Problem

From: dmeredith@phx-az.ampr.org
Date: Mon, 20 Jan 97 20:36:11 MST
To: netsig@tapr.org
Message-ID: <1754@phx-az.ampr.org>
Rendered body type: text/plain

Hi All,

Thanks for the replies...I'm going to try and clean out the table and see
what gives since Steve said he can add more than 10 to his system...

I'll be back..

Daniel

26. node stack problems

From: "Rex H. Ishmael" <rishmael@texhoma.net>
Date: Tue, 21 Jan 1997 20:36:21 -0600 (CST)
To: netsig@tapr.org
Message-ID: <3.0.1.16.19970121212953.385f06ee@texhoma.net>
Rendered body type: text/plain

Thanks to those who answered my call on the tnc lockup.. I took the whole stack down, found 2 were tiny mkII's with the cap (c23) in wrong and fixed that., although they didnt really appear bad one fell apart in trying to remove it... anyway.. got it all back to gether tested for 12 hours (with out traffic).. all still talking no problem and they for sure started easier.. in the past I had to go through several rotations of resetting each one to get them all to talk.. this time just turned them on and they talked across.. anyway.. put it on and once the routes built bck up and the major traffic started thru the spirit (9600) it locked up again... the rest of the stack is working , which is better than the last time as when the sprit locked it usually took one of the others out or caused some really weird loops in the stack.. I havent been back out to the tower (remote site) to get the spirit.. but am sure I will find it with power but the sta light out and the processor locked up.. any new ideas on this.. ?? any help???

REX

=====
Rex Ishmael, Sr. Environmental Engineer, Halliburton Energy Services
E-Mail:rishmael@halnet.com (work)
E-Mail:rishmael@texhoma.net (home)
Amatuer Mail: WD0AJG@WD0AJG.#SCOK.OK.USA.NOAM
=====

27. Further to the node lockup..

From: "Rex H. Ishmael" <rishmael@texhoma.net>
Date: Wed, 22 Jan 1997 20:54:47 -0600 (CST)
To: netsig@tapr.org
Message-ID: <3.0.1.16.19970122214807.386f5ffe@texhoma.net>
Rendered body type: text/plain

Once I got out there and looked, yes the spirit had power up.. but the sta light was out (the blinker in x1j conversion)... although I watched for a short period and it appeared that the other nodes were sending stuff to the spirit ans the spirit was hearing.. (the dcd light would flicker).. I got the spirit back home.. hooked it up by it self and checked into it.. all memory of entered data was gone like it had had a hard reset....? I have now run it for about 24 hours by itself and it appears to work fine.. alone... and no traffic other than my occasional check in to see what it looks like.. buffers ok, (680) cpu loops ok (1000) and no noted errors..? does this sound like a memory problem or cpu problem??? and why would it dump all memory when it locked up?

REX

=====
Rex Ishmael, Sr. Environmental Engineer, Halliburton Energy Services
E-Mail:rishmael@halnet.com (work)
E-Mail:rishmael@texhoma.net (home)
Amatuer Mail: WD0AJG@WD0AJG.#SCOK.OK.USA.NOAM
=====

28. converting a PK-88 to a node

From: Joe LaGanga <JLaGanga@Archcomm.com>
Date: Fri, 24 Jan 1997 10:43:44 -0500
To: "'netsig@tapr.org'" <netsig@tapr.org>
Message-ID: <c=US%a=_%p=Arch%l=WB01NTMSG-970124154344Z-1734@mail.archcomm.com>
Rendered body type: text/plain

To myself and the list:

I currently have a PK-88 and no need for it as a station and would like to put it on the air as a node. Since Software 2000 (makers of NET/ROM) are not in business any longer what firmware/software can do this? Thanks in advance for any help.

Joe
N1EZ0/8
Sincerely
Joe LaGanga

29. Re: [NETSIG:3072] converting a PK-88 to a node

From: Bob Nielsen <nielsen@primenet.com>
Date: Fri, 24 Jan 1997 11:10:45 -0700 (MST)
To: Joe LaGanga <JLaGanga@Archcomm.com>
Cc: netsig@tapr.org
Message-ID: <Pine.LNX.3.95.970124110633.1849A-100000@nielsen.tus.primenet.com>
Rendered body type: text/plain

On Fri, 24 Jan 1997, Joe LaGanga wrote:

```
> To myself and the list:
>
> I currently have a PK-88 and no need for it as a station and would like
> to put it on the air as a node. Since Software 2000 (makers of NET/ROM)
> are not in business any longer what firmware/software can do this?
> Thanks in advance for any help.
```

You could use a minimal DOS computer with the G8BPQ node software (available from [ftp.tapr.org](ftp://ftp.tapr.org) or [ftp.ucsd.edu](ftp://ftp.ucsd.edu)). A local mountain-top node has been running this successfully for several years with a floppy-based XT (no monitor, no keyboard, watchdog to reboot after power glitches).

Bob

 Bob Nielsen Internet: nielsen@primenet.com
 Tucson, AZ AMPRnet: w6swe@w6swe.ampr.org
 AX.25: w6swe@wb7tts.az.usa.noam
 http://www.primenet.com/~nielsen

30. Re: [NETSIG:3072] converting a PK-88 to a node

From: "Charles E. Gelm" <gelmc@erinet.com>
Date: Sat, 25 Jan 1997 09:53:15 -0800
To: netsig@tapr.org
Message-ID: <32EA488B.5F33@erinet.com>
Rendered body type: text/plain

```
Joe LaGanga wrote:
>
> To myself and the list:
>
> I currently have a PK-88 and no need for it as a station and would like
> to put it on the air as a node. Since Software 2000 (makers of NET/ROM)
> are not in business any longer what firmware/software can do this?
> Thanks in advance for any help.
>
> Joe
> N1EZ0/8
> Sincerely
> Joe LaGanga
```

Hi, Joe:

Golly, a single port node is not much of a service. Multiport nodes are much more functional. I don't know of any firmware for the aea tncs as they are not tnc-2 clones. They use a different microprocessor. However, if you are adding this pk-88 to an existing node-stack, you will need net/rom - thenet - x1j firmware. You can also set the pk-88 in kiss mode and attach it to a computer (8088 or better, 256k ram or better) and run g8bpq code. If you have 512k or more ram, you can add an application to the computer-g8bpq-node, such as a dx cluster, IP switch, pbbbs, chat-node, or disaster database server.

Have fun,
Chuck

31. Re: [NETSIG:3074] Re: converting a PK-88 to a node

From: "Charles Brabham" <n5pvl@texoma.net>
Date: Sun, 26 Jan 1997 08:16:41 -0600
To: <netsig@tapr.org>
Message-ID: <199701261412.IAA26401@mail.texoma.net>
Rendered body type: text/plain

From: Steve Stroh <strohs@halcyon.com>
Date: Sun, 26 Jan 1997 13:55:55 -0800 (PST)
To: TAPR Networking SIG Mailing List <netsig@tapr.org>
Message-ID: <Pine.ULT.3.95.970126134919.1367B-100000@chinook.halcyon.com>
Rendered body type: text/plain

On Sun, 26 Jan 1997, John Zantek wrote:

> A node is not a digital repeater, nor is a digipeater. There's no way
> to avoid collisions (CA) in the CD/CSMA environment of conventional
> AX.25 packet. After building nodestacks in five different areas of the
> country, over the past 10 years, I'm still amazed to hear someone
> applaud the value of a single ported hub. Hasn't "hidden transmitter
> syndrome" been well established as a malady to avoid?

Yes, in theory HTS is always a problem with a single port, but in practice HTS tends to only be a problem when the channel gets busy. In a rural area, away from the frequency congestion typical in urban areas, a digipeater is surprisingly usable, especially if it's used primarily for keyboard to keyboard chatting. If it gets popular- say, more than a dozen users, then HTS begins to be noticeable.

It's when the digipeater and single-port node that's used in a dense population / frequency congested area that gives digipeating and single-port nodes a bad name.

Steve N8GNJ

--

Steve Stroh Woodinville, Washington, USA strohs@halcyon.com

35. Re: [NETSIG:3077] Re: converting a PK-88 to a node

From: KB6ZVP@aol.com
Date: Sun, 26 Jan 1997 17:15:43 -0500
To: netsig@tapr.org
Message-ID: <970126171542_409460533@emout02.mail.aol.com>
Rendered body type: text/plain

In a message dated 97-01-26 14:07:26 EST, you write:

<< A node is not a digital repeater, nor is a digipeater. There's no way to avoid collisions (CA) in the CD/CSMA environment of conventional AX.25 packet. After building nodestacks in five different areas of the country, over the past 10 years, I'm still amazed to hear someone applaud the value of a single ported hub. Hasn't "hidden transmitter syndrome" been well established as a malady to avoid? >>

As a newbie I have a question (I hope I don't get flamed, but I'll spin the wheel and take my chance):

If there are two nodes, independent of each other, but on the same frequency, and in line of sight with each others antenna, would both key up at the same time and ignore the fact that the other is keyed up and transmitting packet data? Would the packets collide?

Mark - kb6zvp@aol.com

36. RE: [NETSIG:3074] Re: converting a PK-88 to a node

From: jlaganga <jlaganga@usamobile.com>
Date: Sun, 26 Jan 1997 17:26:40 -0500
To: "'netsig@tapr.org'" <netsig@tapr.org>
Message-ID: <01BC0BAE.9A0587C0@jlaganga.usamobile.com>
Rendered body type: text/plain

Well I guess the best thing to do with this TNC is sell it real cheap or drop test it from the top a BIG building

Thanks to all for the info and inputs
de N1EZ0/8

From: Charles E. Gelm[SMTP:gelmc@erinet.com]
Sent: Saturday, January 25, 1997 10:14 AM
To: netsig@tapr.org
Subject: [NETSIG:3074] Re: converting a PK-88 to a node

Joe LaGanga wrote:

>

> To myself and the list:

>

> I currently have a PK-88 and no need for it as a station and would like
> to put it on the air as a node. Since Software 2000 (makers of NET/ROM)
> are not in business any longer what firmware/software can do this?
> Thanks in advance for any help.
>
> Joe
> N1EZ0/8
> Sincerely
> Joe LaGanga

Hi, Joe:

Golly, a single port node is not much of a service. Multiport nodes are much more functional. I don't know of any firmware for the aea tncs as they are not tnc-2 clones. They use a different microprocessor. However, if you are adding this pk-88 to an existing node-stack, you will need net/rom - thenet - x1j firmware. You can also set the pk-88 in kiss mode and attach it to a computer (8088 or better, 256k ram or better) and run g8bpq code. If you have 512k or more ram, you can add an application to the computer-g8bpq-node, such as a dx cluster, IP switch, pbbs, chat-node, or disaster database server.

Have fun,
Chuck

37. Re: [NETSIG:3079] Re: converting a PK-88 to a node

From: mcduffie@hannibal.wncc.cc.ne.us (Gary McDuffie, Sr.)
Date: Mon, 27 Jan 1997 00:31:15 GMT
To: netsig@tapr.org
Message-ID: <32ebf6cb.9121339@hannibal.wncc.cc.ne.us>
Rendered body type: text/plain

On Sun, 26 Jan 1997 16:46:49 -0600 (CST), you said:

> As a newbie I have a question (I hope I don't get flamed, but I'll spin the
> wheel and take my chance):
>
> If there are two nodes, independent of each other, but on the same
> frequency, and in line of sight with each others antenna, would both key up
> at the same time and ignore the fact that the other is keyed up and
> transmitting packet data?

If they key at the same time, they won't hear each other, and yes, they will collide.

Gary

38. Re: [NETSIG:3078] Single-port nodes/digis have their place

From: John Zantek <wx3k@gw.wx3k.ampr.org>
Date: Sun, 26 Jan 1997 19:18:40 -0600 (CST)
To: netsig@tapr.org
Message-ID: <199701270118.TAA22028@tapr.org>
Rendered body type: text/plain

>>Hasn't "hidden transmitter
>> syndrome" been well established as a malady to avoid?
>
>Yes, in theory HTS is always a problem with a single port, but in practice
>HTS tends to only be a problem when the channel gets busy.

....or when you have more than two stations, counting the digipeater/node.
Been there, done that, got the tee shirt (1985). If two stations are within
close enough RF proximity to energize DCD, then you don't NEED the
relay station. If they're not, then adding a single port relay (relay on a
flat bus) under AX.25 protocol defies the logic of networking. I'm
sorry, it's the design of a wire network laid upon an RF environment
and you have to deal with it.

()
| | () () | | \ () | | | | /)
| | / / \ | | | | | | | | | | ()
| | () \ | | | | | | \) | | | | \)
(/ wx3k@wx3k.ampr.org / jzantek@j1atfe.org
http://wx3k.ampr.org/

39. Re: [NETSIG:3076] Re: converting a PK-88 to a node

From: "Charles Brabham" <n5pvl@texoma.net>
Date: Sun, 26 Jan 1997 19:05:27 -0600
To: <netsig@tapr.org>
Message-ID: <199701270115.TAA06993@mail.texoma.net>
Rendered body type: text/plain

> If you are using your node to cross the prairie, then by all means,
> make it a node. That way you have an end to end acknowledgment;
> but, a single ended node inside town is just a waste of energy, as a
> digipeater will do just as well.
>

Not really. Using a node, there won't be as many collisions. It will work better, and the existence of one node will tend to encourage another. Digipeaters usually only inspire more digipeaters, which makes for a very inefficient "network".

If you don't develop the habit in the first place, you won't have to *unlearn* it later.

Digipeating will get you by if you literally have no other choice. If you have a choice, you will be much better off with a node, *particularly* if there is presently no network in place at your location and you would like to see one develop.

73 DE Charles Brabham, N5PVL
Packet Radio : N5PVL @ N5PVL.#NTX.TX.USA.NOAM
E-Mail : n5pvl@texoma.com
Web : <http://www.texoma.com/~n5pvl>

40. Re: [NETSIG:3083] Re: converting a PK-88 to a node

From: KB6ZVP@aol.com
Date: Sun, 26 Jan 1997 22:08:19 -0500 (EST)
To: netsig@tapr.org
Message-ID: <970126220818_1578808530@emout13.mail.aol.com>
Rendered body type: text/plain

What is the difference between having a node and a digipeater? What are the technical differences and advantages?

73 - Mark, kb6zvp@aol.com
<http://members.aol.com/kb6zvp/kb6zvp.html>

41. Re: [NETSIG:3082] Re: Single-port nodes/digis have their place

From: "Charles Brabham" <n5pvl@texoma.net>
Date: Sun, 26 Jan 1997 22:08:43 -0600
To: <netsig@tapr.org>
Message-ID: <199701270407.WAA20536@mail.texoma.net>
Rendered body type: text/plain

> >Yes, in theory HTS is always a problem with a single port, but in
practice
> >HTS tends to only be a problem when the channel gets busy.
>
> ...or when you have more than two stations, counting the digipeater/node.
> Been there, done that, got the tee shirt (1985). If two stations are
within
> close enough RF proximity to energize DCD, then you don't NEED the
> relay station. If they're not, then adding a single port relay (relay on
a
> flat bus) under AX.25 protocol defies the logic of networking. I'm
> sorry, it's the design of a wire network laid upon an RF environment
> and you have to deal with it.
>

The "logic" is to enable communication which was not possible before, and to lay the groundwork for future expansion by providing a "starting point", encouraging the setup of additional nodes in the area. It's worked plenty of times before. There's nothing to prevent it from working right now.

I sure am glad that all of those hams who pioneered the packet net in their areas were not aware that they were defying the logic of networking when they initially set up a single node. Some people don't know better, and can be discouraged when they hear such comments.

In general, we are better off to encourage new packet activity and growth than to discourage it. When someone asks advice on starting a packet net in their area, it's time to see what can be done with what they have, not time

to try to discourage them if they are not set up to run XYZ, or whatever your favorite rut is. This includes fine technical points.

A person who is interested in starting a packet network where none exists should be treated with respect, and given every encouragement in what he is doing.

73 DE Charles Brabham, N5PVL
Packet Radio : N5PVL @ N5PVL.#NTX.TX.USA.NOAM
E-Mail : n5pvl@texoma.com
Web : <http://www.texoma.com/~n5pvl>

42. Re: [NETSIG:3079] Re: converting a PK-88 to a node

From: Steve Stroh <strohs@halcyon.com>
Date: Sun, 26 Jan 1997 21:20:01 -0800 (PST)
To: TAPR Networking SIG Mailing List <netsig@tapr.org>
Message-ID: <Pine.ULT.3.95.970126211258.3861B-100000@coho.halcyon.com>
Rendered body type: text/plain

On Sun, 26 Jan 1997 KB6ZVP@aol.com wrote:

> As a newbie I have a question (I hope I don't get flamed, but I'll spin the
> wheel and take my chance):
>
> If there are two nodes, independent of each other, but on the same
> frequency, and in line of sight with each others antenna, would both key up
> at the same time and ignore the fact that the other is keyed up and
> transmitting packet data? Would the packets collide?

For TNC's in general, and true of nodes and digipeaters also, they would "hear" that there was another transmission on the frequency and hold off from transmitting. The trick is actually HEARING the transmission.

The two nodes would share the channel pretty well. It's the users of each node that become the problem. It's typical that the users of Node A cannot hear when node B's user's transmit, the chance (it becomes likelihood at some point) of collisions goes up quickly. I can't adequately describe Hidden Transmitter Syndrome in just a few sentences tonight.. I hope there's a link on the Web somewhere that someone else can point you to.

Please help, fellow NetSIG'ers!

Steve N8GNJ

--

Steve Stroh Woodinville, Washington, USA strohs@halcyon.com

43. Re: [NETSIG:3085] Re: Single-port nodes/digis have their place

From: KB6ZVP@aol.com
Date: Mon, 27 Jan 1997 02:21:51 -0500
To: netsig@tapr.org
Message-ID: <970127022149_-2046075964@emout12.mail.aol.com>
Rendered body type: text/plain

In a message dated 97-01-27 00:02:46 EST, you write:

<< A person who is interested in starting a packet network where none exists should be treated with respect, and given every encouragement in what he is doing.

73 DE Charles Brabham, N5PVL
Packet Radio : N5PVL @ N5PVL.#NTX.TX.USA.NOAM
E-Mail : n5pvl@texoma.com
Web : <http://www.texoma.com/~n5pvl>
>>

Whew - a breath of fresh air...

Thank you very much. So often all I see are negative comments. It is a real pleasure to see a positive one.

Mark, kb6zvp@aol.com
<http://members.aol.com/kb6zvp/kb6zvp.html>

44. Re: [NETSIG:3075] Re: converting a PK-88 to a node

From: "Charles E. Gelm" <gelmce@erinet.com>
Date: Mon, 27 Jan 1997 07:23:08 -0800

To: netsig@tapr.org
Message-ID: <32ECC85C.5CC5@erinet.com>
Rendered body type: text/plain

Charles Brabham wrote:

>
> > Golly, a single port node is not much of a service. Multiport nodes are
> much
> > more functional.
>
> Golly, aren't we high and mighty?
>
> A single port node is a VAST improvement over no node at all. That should
> be obvious to anybody.
>
> 73 DE Charles Brabham, N5PVL
> Packet Radio : N5PVL @ N5PVL.#NTX.TX.USA.NOAM
> E-Mail : n5pvl@texoma.com
> Web : http://www.texoma.com/~n5pvl

Hi, Charles:

Yes, I also thot my first line looked a little haughty, but I had quickly pressed the 'send' button. I feel it is accurate.

However, I was not comparing a 'node' to no 'node'.

Is a single port node 'better than' a single port digipeater?

Hmmmm.

73, Chuck

45. Re: [NETSIG:3079] Re: converting a PK-88 to a node

From: "Charles E. Gelm" <gelmce@erinet.com>
Date: Mon, 27 Jan 1997 07:54:30 -0800
To: netsig@tapr.org
Cc: netsig@tapr.org
Message-ID: <32ECCFB6.6A79@erinet.com>
Rendered body type: text/plain

KB6ZVP@aol.com wrote:

<snip>
>
> As a newbie I have a question (I hope I don't get flamed, but I'll spin the
> wheel and take my chance):
>
> If there are two nodes, independent of each other, but on the same
> frequency, and in line of sight with each others antenna, would both key up
> at the same time and ignore the fact that the other is keyed up and
> transmitting packet data? Would the packets collide?
>
> Mark - kb6zvp@aol.com

Normally, (half-duplex - amateur transceivers) when a TNC decides to transmit, it keys-up and becomes deaf. Quickly to humans and slowly to computers, the TNC starts sending 'flags' and switches the transmitter on/receiver off, the PLL locks, the rf power rises and other receivers squelch opens, other TNCs begin hearing flags, then their Carrier Detect lamps light. In a 'standard' packet station (user), there can be .1 to .2 seconds between the time a TNC decides to transmit and when other TNC detect that data.

So, they both don't need to 'key up at the same time' to both be transmitting at the same time. They may just be within .2 seconds.

Of course it would 'ignore the fact that the other is transmitting data' because the transmitting station(s) are deaf!

Collision avoidance begins after a frame is 'not acknowledged'.

Regards, Chuck

46. Re: [NETSIG:3084] Re: converting a PK-88 to a node

From: "Charles E. Gelm" <gelmce@erinet.com>
Date: Mon, 27 Jan 1997 08:13:48 -0800
To: netsig@tapr.org
Message-ID: <32ECD43C.4D1@erinet.com>
Rendered body type: text/plain

KB6ZVP@aol.com wrote:

>
> What is the difference between having a node and a digipeater? What are
> the technical differences and advantages?
>
> 73 - Mark, kb6zvp@aol.com
> <http://members.aol.com/kb6zvp/kb6zvp.html>

Hey, Good Question!

I remember reading about digipeating when I first got into packet. I remember that digipeating would work well if there was one digipeater and two or more users.

So, are there any URLs to documents describing ax.25 in general and specifically digipeating.

When, how and why multiport nodes work better. Why converting 99 digipeaters on 145.01 to 99 single port nodes on 145.01 didn't help...

Why all the packet stations in Lawrence, KS, can use 145.01, but ya git a coupla dozen or so on 145.01 in New York City and things go to pot... !

(Sorry: Phil & Karl)

<http://www.wizard.of.oz.org/pub/allabout.ax25>

73, Chuck

47. Re: [NETSIG:3088] Re: converting a PK-88 to a node

From: "Charles Brabham" <n5pvl@texoma.net>
Date: Mon, 27 Jan 1997 11:33:09 -0600
To: <netsig@tapr.org>
Message-ID: <199701271741.LAA00756@mail.texoma.net>
Rendered body type: text/plain

> Is a single port node 'better than' a single port digipeater?
>
> HMMMMM.

I feel it is much better. You start off doing things right, and have a solid base to build from. It will perform somewhat better than a digipeater due to a reduction in collisions, but the important advantage of the single node is it's tendency to inspire other nodes.

If you're not careful with them, you'll end up with a network before you know it.

If you figured that your single-port "network" would never grow, and that there would never be more than three or four packet ops in the area, then I could see where there wouldn't be any clear advantage in using a node. My feeling is that this "no-growth" scenario is so unlikely to happen though, that it doesn't really rate much discussion.

An additional advantage of a single node is that the hams in your new packet LAN will start off by learning how to use a packet node, and will then be prepared to use other new nodes when they appear. No old habits to unlearn.

The digi will only teach hams about using a digi, which is a dead-end street if you are wanting to start a network. As far as I can tell, nodes have been preferred over digi's ever since they have existed. All of those hams can't be wrong.

In general, I'd say digipeat if that's the best you can do. It's a heck of a lot better than nothing, and gets the job done if there is no network (nodes) available.. If you are set up to run a node though, you are fortunate because the node will ultimately serve you and your local packet community much better.

I have used the PK-88 with G8BPQ node/switch software in the past with good results. Any old PC will run BPQ, even off of a floppy. It runs as a TSR, so you can use the computer for other things while the node runs in the background. There are a number of packet PMS, BBS, Cluster, and utility programs which work with BPQ, and it can be used with a great variety of hardware, including the PK-88.

73 DE Charles Brabham, N5PVL
Packet Radio : N5PVL @ N5PVL.#NTX.TX.USA.NOAM
E-Mail : n5pvl@texoma.com
Web : http://www.texoma.com/~n5pvl

48. Re: [NETSIG:3090] Re: converting a PK-88 to a node

From: Sid Ashen-Brenner <sashen@midusa.net>
Date: Mon, 27 Jan 1997 17:44:51 -0600
To: netsig@tapr.org
Message-ID: <3.0.32.19970127170330.0068e8b4@midusa.net>
Rendered body type: text/plain

At 07:26 AM 1/27/97 -0600, you wrote:
>
> When, how and why
> multiport nodes work better. Why converting 99 digipeaters on 145.01
> to 99 single port nodes on 145.01 didn't help...
>
> Why all the packet
> stations in Lawrence, KS, can use 145.01, but ya git a coupla dozen or
> so on 145.01 in New York City and things go to pot... !
>
> (Sorry: Phil & Karl)

If the above was reference to WK5M Karl is no longer working for Kantronics, he's now with E. F. Johnson up North somewhere. For whatever that's worth.

73 de Sid

Sid Ashen-Brenner Salina, Kansas
Internet : sashen@midusa.net
AX-25 : n0obm @ n0obm.#ncks.ks.usa.noam

49. Re: [NETSIG:3079] Re: converting a PK-88 to a node

From: dkelly@hiwaay.net
Date: Sun, 26 Jan 1997 21:24:14 -0600
To: netsig@tapr.org
Cc: KB6ZVP@aol.com
Message-ID: <199701270324.VAA08544@nexgen.ampr.org>
Rendered body type: text/plain

KB6ZVP@aol.com writes:
>
> As a newbie I have a question (I hope I don't get flamed, but I'll spin the
> wheel and take my chance):
>
> If there are two nodes, independent of each other, but on the same
> frequency, and in line of sight with each others antenna, would both key up
> at the same time and ignore the fact that the other is keyed up and
> transmitting packet data? Would the packets collide?

One radio/TNC should not key when the frequency is in use. However there is a time interval between the event on radio keys and another notices there is another station on the frequency. This is why a fast Tx/Rx changeover, and why fast detect modems are important.

Our protocols use random number generators to "throw the dice" and decide whether to transmit when they detect an open frequency. Look into your manuals on "persist" and family.

With only 3 or 4 stations on the air, none can hear each other, but all can hear a common node, things won't be too bad until you get a PBBS forwarding. We simply put up what we can. The packet network is practically held together with baling wire and duct tape. :-)

Anybody have any good ideas/designs for a 1200 baud full duplex bit-regen repeater?

73,

--

David Kelly N4HHE, dkelly@hiwaay.net

=====

The human mind ordinarily operates at only ten percent of its capacity -- the rest is overhead for the operating system.

50. Broken DRSI

From: Thomas I Mathewson <tommath@norwich.net>
Date: Mon, 27 Jan 1997 16:52:59 -0800
To: "bbssig@tapr.org" <bbssig@tapr.org>

Cc: netsig@tapr.org
Message-ID: <32ED4DEB.16A1@norwich.net>
Rendered body type: text/plain

Hello All

I have a couple of broken DRSI cards and was wondering if anybody knew of any place where I could send them to get them repaired.
I have a single port type one card and a dual port type 2 card.

73 Tom
KA2MYD

51. Re: [NETSIG:3094] Broken DRSI

From: Steve Stroh <strohs@halcyon.com>
Date: Tue, 28 Jan 1997 03:38:57 -0800 (PST)
To: TAPR Networking SIG Mailing List <netsig@tapr.org>
Message-ID: <Pine.ULT.3.95.970128033707.19402B-100000@chinook.halcyon.com>
Rendered body type: text/plain

On Tue, 28 Jan 1997, Thomas I Mathewson wrote:

DRSI, last I'd heard, was still in business, but had decided to focus their efforts on commercial, not Amateur business. They still provide repairs for their units.

Steve N8GNJ

> Hello All
> I have a couple of broken DRSI cards and was wondering if anybody
> knew of any place where I could send them to get them repaired.
> I have a single port type one card and a dual port type 2 card.
> 73 Tom
> KA2MYD

--

Steve Stroh Woodinville, Washington, USA strohs@halcyon.com

52. Re: [NETSIG:3093] Re: converting a PK-88 to a node

From: KB6ZVP@aol.com
Date: Tue, 28 Jan 1997 08:11:22 -0500 (EST)
To: netsig@tapr.org
Message-ID: <970128081120_647565892@emout05.mail.aol.com>
Rendered body type: text/plain

Another question from a newbie:

If I had a spare (or more than one) PacComm Spirit 2, 9600 Baud TNC, what would I have to do in order to turn it into a node or use it with FBB to forward?

Mark - kb6zvp@aol.com

53. rbenny

From: dbitts@ccmsmtp.cbcph.navy.mil
Date: Tue, 28 Jan 97 09:31:34 PST
To: netsig@tapr.org
Message-ID: <9700288544.AA854473071@ccmsmtp.cbcph.navy.mil>
Rendered body type: text/plain

There is no user named rbenny at my post office (ccmsmtp.cbcph.navy.mil). Please remove him from your mailing list(s). Thanks.

Dan Bitts
Computer Specialist
Naval Facilities Contracts Training Center
Port Hueneme, CA
dbitts@cbcph.navy.mil

54. Re: [NETSIG:3096] Re: converting a PK-88 to a node

From: Sid Ashen-Brenner <sashen@midusa.net>
Date: Tue, 28 Jan 1997 18:51:50 -0600
To: netsig@tapr.org
Message-ID: <3.0.32.19970128173501.006932a8@midusa.net>
Rendered body type: text/plain

At 07:16 AM 1/28/97 -0600, you wrote:

> Another question from a newbie:

>

> If I had a spare (or more than one) PacComm Spirit 2, 9600 Baud TNC, what
> would I have to do in order to turn it into a node or use it with FBB to

>forward?

For use with FBB ... if running BPQ, put it in KISS mode and go. I'm sure that others here will have much more detailed answers, but that's all that I did with mine. Runs just fine here on 446.100 with a Tekk KS-960.

It is "suggested" that one buy the node version of the Spirit 2 for node usage, as it's been beefed up a bit. Gwynn would be better able to give the precise differences between the versions!

It's a good TNC, try and have some FUN with it!
73 de Sid

Sid Ashen-Brenner Salina, Kansas
Internet : sashen@midusa.net
AX-25 : n0obm @ n0obm.#ncks.ks.usa.noam

55. Node Functions

From: "(SV2AGW)Rossopoulos George" <sv2agw@the.forthnet.gr>
Date: Wed, 29 Jan 1997 18:04:10 +0200
To: <netsig@tapr.org>
Message-ID: <199701291615.SAA20390@info.forthnet.gr>
Rendered body type: text/plain

I am new in the netsig and also my packet network experience is small. I have written a series of Packet Programs for WIN95. The programs main ability is the multitasking. This means that with just a TNC you can run different packet programs. You can run an unattended fwding program a terminal and a cluster. All of them at the same time. Now i am writing a node program. I tried first to port the code from NORD><LINK to WIN95 but no success. The code is written i C ,there are only Global variables and the remarks are all in German. And although my mother language is Greek everything seems Greek to me!!!!!! So i decide to start from scratch in my way!! I write in C++ (Borland version) for WIN95. So far i have ,almost finished l3 &l4 and the program is under test. The help from Buck (K4ABT the CQ packet author) gave me a push and everything seems to go well.

Now I need your help to continue. I need your experience as SYSOPS and Users to make the program easy for use and to add also new features. I need your ideas. What do you think a node must do?(except from networking).

What new functions i must add?? Any good idea for a more efficient procedure in autorouting???

I know that in USA there are different kind of nodes and perhaps i can collect all the good things from them.

Here in Greece our network supports only BBS FWD traffic. No user is allowed to use the node for any kind of contact. So i cannot see where i need to improve things.

So i wait for your ideas and comments.

Also if there is anyone who knows programing (and Packet!!!!), perhaps we can join our efforts for the best. (I have comments in English!!!)

George Rossopoulos
sv2agw@the.forthnet.gr (email)
SV2AGW@SV2DXC.TSL.GRC.EU (packet)
<http://www.forthnet.gr/sv2agw>
<http://www.intranet.gr/isefi/rossopou/rossopou.htm>

56. ROSE List

From: "Thomas A. Moulton" <w2vy@gte.net>
Date: Fri, 31 Jan 1997 06:33:31 -0500
To: tnos-topics@lantz.com, netsig@tapr.org, tncsig@tapr.org,
tcp-group@ucsd.edu, tnc-tng@lantz.com
Message-ID: <32F1D88B.294B@gte.net>
Rendered body type: text/plain

Our mailler lost the subscription list for the ROSE Mailing List.

Please re-subscribe by sending a message to rose-request@rats.org
or visit our web site <http://www.rats.org/rose>

Tom, W2VY

February 1997

Original source file: netsig.9702

Source: http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.9702

1. Re: The ARRL Letter Vol 16, No 5

From: KB6ZVP@aol.com
Date: Sat, 1 Feb 1997 20:28:57 -0500 (EST)
To: elindquist@arrl.org, amsat-bb@amsat.org, netsig@tapr.org, tapr-bb@tapr.org, hfsig@tapr.org, bbssig@tapr.org, fbb@f6fbb.org, rick@janrix.com
Message-ID: <970201202856_1047856303@emout06.mail.aol.com>
Rendered body type: text/plain

No, it is not off topic. It affects us all. The future is now and if we don't take action, there won't be any Ham radio to talk about.

In a message dated 97-02-01 07:23:18 EST, the ARRL writes:

<< The Intermediate CW test would be 5 words per minute (the same as the current Tech Plus requirement), but the committee proposed that the General class CW requirement be set at 10 wpm. There still would be no additional CW

exam for the Advanced ticket, nor would there be any change in the 20-wpm requirement for the Extra. Exams for all classes would include a return to a

sending test and the requirement for one minute of solid copy during a five-minute test--instead of the current method that tests on the content of

the CW text. >>

Why? Why? Why?

Why does the League insist on maintaining this archaic link to the past? The only organization on the planet stuck in this rut is the League. Militaries, Governments, and other (mostly) advanced life forms have recognized the need to progress, yet the League continues to walk backwards.

Why not test on one's ability to operate voice? Why not test on one's ability to operate packet? How about ATV?

Why are you even considering testing on the ability to use one mode instead of all modes? Could your answer be "because we have always done it that way". Come on members of the League - join the 21st Century.

The code is dead, and Amateur radio will die if you/we do not advance the science and the membership. This antiquated tie to the code is forcing more and more of us away. I will not upgrade to General or higher because of the code requirement. I have no interest in it. My interest lies in more advanced methods of communication. Yet, I do not see a requirement for Hams to learn spread spectrum just to get a license. I have nothing against the code itself, just the requirement to test for it.

A sending test for code? Get real folks. Now you are really walking backwards in time. Go ahead, drive off the rest of the folks who had any interest in radio. When my son grows up, he will just throw my inherited \$100,000 station in the junk pile. There is no test for the Internet and Ham radio cannot compete with this far superior mode of communication (AND it is in the classroom, the work place, every house in America will have it soon).

Come on tell me - what can I say to all the kids out there even remotely toying with the idea of getting into radio? They ask why? Why should I do that AND take a TEST, when I can do all of it on the Internet in real time for free and no test. What possible intelligence can there be behind an idea to step back 40 years in time and scare off all prospective new operators and stifle this service. (Maybe the Directors have a hidden agenda all their own)

Does the membership know you are spending their money to study this project? I gave up my membership because of this stuck-in-the-mud-go-nowhere-philosophy that the Directors have. You haven't done anything progressive in years, and this is just another fine example of why the dinosaurs died.

Open your eyes and see the light - your killing us off! Or make the call to Congress and tell them to go ahead and sell off the rest of our frequencies, the League has spoken again.

By the way - this message went out to over 500,000 people in less than 15 seconds. No static, no drift, no fading, no fuss. And I know it got there accurately, without tuning, without antenna's, without TVI or RFI, and without the XYL and neighbors nagging. I should tell my son to learn the code because.....?

73 and standing by for the flames,

2. Re: The ARRL Letter Vol 16, No 5

From: "Larry W. Johnson" <larryj@cetlink.net>
Date: Tue, 14 Jan 1997 21:57:12 -0500
To: KB6ZVP@aol.com
Cc: elindquist@arrl.org, amsat-bb@amsat.org, netsig@tapr.org, tapr-bb@tapr.org, hfsig@tapr.org, bbssig@tapr.org, fbb@f6fbb.org, rick@janrix.com, onemm@cetlink.net
Message-ID: <32DC4788.2216@cetlink.net>
Rendered body type: text/plain

KB6ZVP@aol.com wrote:

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> don't take action, there won't be any Ham radio to talk about.
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> sending test and the requirement for one minute of solid copy during a
> five-minute test--instead of the current method that tests on the content of
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> accurately, without tuning, without antenna's, without TVI or RFI, and
> without the XYL and neighbors nagging. I should tell my son to learn the
> code because.....?
>
> 73 and standing by for the flames,
>

> Mark, kb6zvp@aol.com

Hello Mark;

My name is Larry Johnson and my Call is W7LJ. I have been a Ham for 35 years and have been licenced in several countries, some with less stringent requirements and some with very difficult requirements.

First of all Ham Radio is a Hobby, it is something I enjoy, I derive pleasure from it. I was not forced into it and no one has ever pressured or coerced me into participating in any activity related to Amateur Radio.

You as an American have the right to your opinion and the right to voice your opinion to anyone one that will listen to it. I assure you that from personal experiences in other countries that over half of the other people in the world do not share that privilege.

You state that backwards thinking on the part of the ARRL is killing Ham Radio. I do not agree with all of the positions that The ARRL takes but I remain a member because I feel they are the only Link between us and The FCC.

If you will research the facts for the last twenty years you will find the requirement to obtain a Ham Licence have been getting progressively Easier. Also since the the emplementation of The VE Program and the Codeless License the number of licensed hams has almost doubled.

As far as the new technology " G R E A T " , I average about 200 hours a month on the internet. I still have time for Ham Radio, especially CW.

Just remember opinions are the most common thing around, everyone has one but every one fortunately does not have to share the same one.

Larry W. Johnson (W7LJ)

3. Re: The ARRL Letter Vol 16, No 5 --

From: "Charles Brabham" <n5pvl@texoma.net>
Date: Sun, 2 Feb 1997 00:09:57 -0600
To: <netsig@tapr.org>
Cc: <bbssig@tapr.org>
Message-ID: <199702020613.AAA19046@mail.texoma.net>
Rendered body type: text/plain

> No, it is not off topic. It affects us all. The future is now and if we
> don't take action, there won't be any Ham radio to talk about.

It may not go along well with your personal desires, but it will be great for amateur radio, IMHO. I'm sorry to see you feel badly about it, but I'm not sorry to see the code requirement for HF retained, and the testing method upgraded.

For my part, I would have looked into going even further into returning our testing and requirements closer to their earlier, higher standards. (Level of difficulty)

The present setup deprives newcomers of the need to seek out and learn from an Elmer. A prospective ham can buy a question-answer book, cram for a few days, then meet his first amateur radio operators (briefly) during the VE testing. Then he's out the door with a ham ticket, but with practically no exposure to experienced hams or knowlege of many of amateur radio's unspoken rules of conduct. How can we really expect these hams to feel "connected" to Amateur Radio, when they are never really exposed to it, or properly greeted into our ranks?

This is no way to treat prospective or new hams. The present no-code ticket was set up as a way of rapidly swelling our ranks for political purposes. Our requirements were relaxed, and sure enough we did get a large number of new hams.

Unfortunately the plan has backfired somewhat, because these new hams were rushed right past the time-honored "Elmer" system which had given the ham radio community much of it's previous solidarity and feeling of fraternity. They were left out in the cold. I don't blame them for being dissatisfied, and can't blame them if they do not experience the same level of pride which went with being a part of amateur radio in past years.

As a result we now have many more hams, but we no longer have solidarity or the same feeling of fraternity which existed when the "Elmer" system was

allowed to do it's work. Much of the devisiveness and clamor for a further reductions of our standards can be directly traced back to the bypassing of the "Elmer" system as an integral part of bringing new hams into the hobby. The "Elmer" system was crippled, in it's turn, by our reduction of liscensing standards. (No-code tech, "communicator", ect.)

In recent news, AOL experienced a drop in the quality of service they could provide, immediately after a sudden reduction in the cost of cruising the web through their service. The sudden increase in the amount of time their customers tended to stay online created a traffic jam, and many customers got "busy signals".

Amateur Radio has experienced something very similar, in that after inducing a sudden increase in liscensing with reduced requirements, our educational and fraternal induction system was rapidly overwhelmed and lost most of it's effectiveness. This has been unfortunate for all hams, in many ways.

Our new hams get a "busy signal" from the "Elmer" system, and we now have many (deservedly) dissatisfied customers on our hands.

73 DE Charles Brabham, N5PVL
Packet Radio : N5PVL @ N5PVL.#NTX.TX.USA.NOAM
E-Mail : n5pvl@texoma.com
Web : <http://www.texoma.com/~n5pvl>

4. Re: The ARRL Letter Vol 16, No 5

From: Thomas Ringate <ThomasLRingate@ij.net>
Date: Sun, 02 Feb 1997 16:17:17 -0500
To: larryj@cetlink.net
Cc: KB6ZVP@aol.com, elindquist@arrl.org, amsat-bb@amsat.org, netsig@tapr.org, tapr-bb@tapr.org, hfsig@tapr.org, bbssig@tapr.org, fbb@f6fbb.org, rick@janrix.com, onemm@cetlink.net
Message-ID: <32F5045C.148B@ij.net>
Rendered body type: text/plain

Larry W. Johnson wrote:

> Just remember opinions are the most common thing around,everyone has
> one but every one forunately does not have to share the same one.

My opinion is that as a responsible citizen of the USA, it's time to abolish amateur radio, and give the freq. back to the citizens of the USA. There are over 300 million citizens of the USA, but only a handful receive any use of this precious asset. How can any of us look at our neighbors and say we are making good use of an asset worth billions of \$\$ to the USA, and we abuse it like we do.

We should all be ashamed. We do not provide a service that is worth the cost amateur radio is costing the rest of the non-amateur population of this country. If the facts were presented in a national election, and this were put to a vote of the general poplualtion, amateur radio would be history never again to be heard from.

There is no justification to reserve a billion dollar asset for the jokers who are using it.

Oh yes, I have also been an amateur since 1957, but I have been a citizen of the USA since 1944 and somehow that responsibility weighs more heavily than the simple enjoyment I get from talking on the radio every now and then.

Keep CW, in fact make it 50 words per minute for the novice. Let's get this over with as fast as we can so all 300+ million of us can get some use out of this asset.

If we each had to pay a license fee to compensate for the lost revenue this spectrum is worth, Bill Gates would be the only person who could afford a license.

My vote is to end amateur radio and make a valid use of this precious spectrum for the good of all, not just a few old fuddy duddies.

5. Re: The ARRL Letter Vol 16, No 5

From: "James D. Mayfield" <jdm326@revealed.net>
Date: Sun, 02 Feb 1997 17:03:49 -0600
To: Thomas Ringate <ThomasLRingate@ij.net>, larryj@cetlink.net
Cc: KB6ZVP@aol.com, elindquist@arrl.org, amsat-bb@amsat.org, netsig@tapr.org,

tapr-bb@tapr.org, hfsig@tapr.org, bbssig@tapr.org, fbb@f6fbb.org,
rick@janrix.com, onemm@cetlink.net
Message-ID: <3.0.32.19970202170337.006b85a4@revealed.net>
Rendered body type: text/plain

What a nut!!!

At 04:17 PM 2/2/97 -0500, Thomas Ringate wrote:

>Larry W. Johnson wrote:

>

>> Just remember opinions are the most common thing around, everyone has
>> one but every one fortunately does not have to share the same one.

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>precious spectrum for the good of all, not just a few old fuddy duddies.

>

- Best '73 -
- J. Dave Mayfield -
- <http://home.revealed.net/qste/bnr> -
- qste@revealed.net -
- 309-797-3827 -

6. Re: [NETSIG:3104] Re: The ARRL Letter Vol 16, No 5

From: Mike Curtis <wd6ehr@kaiwan.com>
Date: Sun, 2 Feb 1997 15:15:48 -0800 (PST)
To: netsig@tapr.org
Message-ID: <Pine.SUN.3.95.970202143731.15507E-100000@kaiwan009.kaiwan.com>
Rendered body type: text/plain

On Sun, 2 Feb 1997, Thomas Ringate wrote:

> Larry W. Johnson wrote:

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>> one but every one fortunately does not have to share the same one.

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> receive any use of this precious asset. How can any of us look at our
> neighbors and say we are making good use of an asset worth billions of
> \$\$ to the USA, and we abuse it like we do.

As a licensed amateur, I have access to several MHz of exclusive
frequencies. Most of our spectrum is shared with other services.

As a resident, I have the use of many many more times the spectrum. We

have 72 MHz for VHF TV, something like 300 MHz for UHF TV, plus all the satellite frequencies adding up to a LOT more.

- > We should all be ashamed. We do not provide a service that is worth
- > the cost amateur radio is costing the rest of the non-amateur population
- > of this country. If the facts were presented in a national election,
- > and this were put to a vote of the general population, amateur radio
- > would be history never again to be heard from.

Even if the USA abolished amateur radio, it would still not be available for commercial interests. The REST of the world uses these frequencies. You've overlooked the big picture.

- > There is no justification to reserve a billion dollar asset for the
- > jokers who are using it.

Yes there is. If you read part 97.1, it provides the justification. Emergencies, a trained pool of radio operators, advancing the state of the art. ALL of these are being done via ham radio today.

- > Oh yes, I have also been an amateur since 1957, but I have been a
- > citizen of the USA since 1944 and somehow that responsibility weighs
- > more heavily than the simple enjoyment I get from talking on the radio
- > every now and then.

I don't see how you make this connection, that somehow being a ham is a conflict with being a responsible citizen. The two are in fact absolutely unrelated.

If you want to help the government make ends meet, pay your income tax honestly and don't cheat. Report everything you're supposed to. If everyone did this, there'd be no deficit. But because a large number of these 300 million people don't do this - the SAME 300 million you'd give amateur spectrum to - the government has money problems.

Another myth is that amateur radio was created for enjoyment, as you allude above. Part 97.1 clearly states that this is not the reason for its existence, although it is not prohibited - quite to the consternation of some.

- > Keep CW, in fact make it 50 words per minute for the novice. Let's
- > get this over with as fast as we can so all 300+ million of us can get
- > some use out of this asset.

Every time there's an emergency and those of us who do more than participate in "the simple enjoyment I get from talking on the radio every now and then" by passing traffic and such, a portion of these 300 mil DO get "some use of it". Sometimes (e.g. earthquake in Mexico City, etc.) amateur radio is the ONLY means of communication with a disaster-stricken area.

- > If we each had to pay a license fee to compensate for the lost
- > revenue this spectrum is worth, Bill Gates would be the only person
- > who could afford a license.

And if the government had to finance a network like amateur radio, it would cost more than they'd get for the spectrum. It's a smart move on their part to keep ham radio in existence, as well as an international issue.

- > My vote is to end amateur radio and make a valid use of this
- > precious spectrum for the good of all, not just a few old fuddy duddies.

As a group, these "old fuddy-duddies" have their equipment up and operating, being tested regularly by actual use. When emergencies strike, they as a group make their services available. They also know how to properly operate their gear - assuming they know what the test answers really mean.

Who would you give ham frequencies to? The people? For an unlicensed service like CB? Yeah, that'd be really smart :-). Or would you sell them to business? How much would it cost to set up an emergency service like ham radio? Where will we be able to develop new protocols like Pactor, G-tor, Clover, and such? And what would be the motivation for this?

Sure there are abuses, rude hams, and such - just as it is in all other aspects of life. Hams are a cross section of the general public. The easiest way to eliminate these from your life is to use the "abuse-stop" control on your rig. It's typically labeled "power" :-). Then you can

pretend that ham radio has been abolished as the rest of us continue to enjoy it :-)

-- mike

7. Re: The ARRL Letter Vol 16, No 5

From: Nicolaus Sallay <nsallay@internext.com.br>
Date: Sun, 02 Feb 1997 22:00:44 -0400
To: Thomas Ringate <ThomasLRingate@ij.net>
Cc: larryj@cetlink.net, KB6ZVP@aol.com, elindquist@arrl.org,
amsat-bb@amsat.org, netsig@tapr.org, tapr-bb@tapr.org, hfsig@tapr.org,
bbssig@tapr.org, fbb@f6fbb.org, rick@janrix.com, onemm@cetlink.net
Message-ID: <32F54659.53A9@internext.com.br>
Rendered body type: text/plain

Hello Sir,
Excuse me, it's long time ago, that I heard such a amount of nonsense written down in a specific place like this. Stand by, please and reflect only a few moments about your sentences.
Best regards and 73
Nicolaus K.S.Sallay - PP8DA
PP8DA@amsat.org
nsallay@internext.com.br
=====

Thomas Ringate wrote:

>

> Larry W. Johnson wrote:

>

> > Just remember opinions are the most common thing around, everyone has

> > one but every one fortunately does not have to share the same one.

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8. Re: [NETSIG:3106] Re: The ARRL Letter Vol 16, No 5

From: mcduffie@hannibal.wncc.cc.ne.us (Gary McDuffie, Sr.)
Date: Mon, 03 Feb 1997 04:12:11 GMT
To: netsig@tapr.org
Message-ID: <32f544f0.10923923@hannibal.wncc.cc.ne.us>
Rendered body type: text/plain

On Sun, 2 Feb 1997 17:19:46 -0600 (CST), you said:

All deleted:

Why is this list duplicating almost every entry?

Gary

9. Re: The ARRL Letter Vol 16, No 5

From: Radio Amateurs Assembly - RAA <radioass@idsc.gov.eg>
Date: Mon, 3 Feb 1997 06:23:25 +0000 (africa)
To: Thomas Ringate <ThomasLRingate@ij.net>
Cc: larryj@cetlink.net, KB6ZVP@aol.com, elindquist@arrl.org,
amsat-bb@amsat.org, netsig@tapr.org, tapr-bb@tapr.org, hfsig@tapr.org,
bbssig@tapr.org, fbb@f6fbb.org, rick@janrix.com, onemm@cetlink.net
Message-ID: <Pine.SOL.3.94.970203061105.4102D-100000@idsc.gov.eg>
Rendered body type: text/plain

Hi folks!

What is this guy saying!

First it seemed to be a "national" war between fellows of the ARRL on the code issue. On the sudden, he came with this ingenious idea of selling the amateur spectrum and abolishing amateur radio!

What a joke! He forgot that the amateur spectrum is not a property of the USA or any other single country to ask for "presenting it in an national election"! It is owned by all the international community. This guy is not a radio amateur and never been an amateur one day. Being an amateur is not just a piece of paper to hang on the wall...I even doubt he ever had one! Radio amateurs are the people who made the radio spectrum worth these billions of dollars he is talking about and they will continue to add value to it whether he likes it or not.

I noticed that after the Internet has become that popular...a lot of simple minded half-knowledged and let me say "untrue" amateurs fall in the dilemma of asking themselves "if it is so easy and funny to use the internet to communicate with other people..why to go thru all the fuss of amateur radio?". They ignore that the Internet as well as all the modern communications avenues are merely branches on the road paved by amateur radio and radio amateurs during their history. In other words all are coming out from the cloak of amateur radio. Anyway, it needs to be a radio amateur first to understand that amateur radio is not the "simple enjoyment ..of talking on the radio".

Hossam El Shenawy, SU1HM
Network Manager,
Egypt Radio Amateurs Assembly

email(alias): SU1HM@amsat.or

10. Re: [NETSIG:3108] Re: The ARRL Letter Vol 16, No 5

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Sun, 2 Feb 1997 22:37:22 -0600
To: netsig@tapr.org
Message-ID: <v03007806af1b1bdc14ee@[208.134.134.40]>
Rendered body type: text/plain

Beucause the first message was sent to like fifty lists and then everyone thus far has also done a reply back to all the lists of the first message.

Greg

>On Sun, 2 Feb 1997 17:19:46 -0600 (CST), you said:
>
>All deleted:
>
>Why is this list duplicating almost every entry?
>
>Gary

Greg Jones, WD5IVD
Austin, Texas
wd5ivd@tapr.org
<http://www.tapr.org/~wd5ivd>

11. Re: The ARRL Letter Vol 16, No 5

From: "Larry W. Johnson" <larryj@cetlink.net>
Date: Wed, 15 Jan 1997 23:53:42 -0500
To: "Radio Amateurs Assembly - RAA" <radioass@idsc.gov.eg>, <SU1HM@amsat.org>

Cc: <KB6ZVP@aol.com>, <onemm@cetlink.net>, <elindquist@arrrl.org>,
<amsat-bb@amsat.org>, <netsig@tapr.org>, <tapr-bb@tapr.org>,
<hfsig@tapr.org>, <bbssig@tapr.org>, <rick@janrix.com>,
<qste@revealed.net>, <PP8DA@amsat.org>, <ThomasLRingate@ij.net>
Message-ID: <199702030504.AAA05020@moltar.cetlink.net>
Rendered body type: text/plain

Hello Hossam,

Unfortunately this guy appears to have a current ham ticket, he did not sign his Call but as near as I can figure He is K0ZXF currently living in Tampa,Florida.

I can't believe he has been a Ham for that long and has always had those feelings about the hobby.If he has I guess we can consider a true hippocrite.

I wish to thank all of you that has sent a copy of your responce to me but please delete fbb@f6fbb.org from any further responce.Per Olsen has requested this.

73's to all
Larry Johnson - W7LJ

> From: Radio Amateurs Assembly - RAA <radioass@idsc.gov.eg>
> To: Thomas Ringate <ThomasLRingate@ij.net>
> Cc: larryj@cetlink.net; KB6ZVP@aol.com; elindquist@arrrl.org;
amsat-bb@amsat.org; netsig@tapr.org; tapr-bb@tapr.org; hfsig@tapr.org;
bbssig@tapr.org; fbb@f6fbb.org; rick@janrix.com; onemm@cetlink.net
> Subject: Re: The ARRL Letter Vol 16, No 5
> Date: Monday, February 03, 1997 1:23 AM
>
> Hi folks!
>
> What is this guy saying!
>
> First it seemed to be a "national" war between fellows of the ARRL on the
> code issue. On the sudden, he came with this ingenious idea of selling
the
> amateur spectrum and abolishing amateur radio!
>
> What a joke! He forgot that the amateur spectrum is not a property of the

> USA or any other single country to ask for "presenting it in an national
> election"! It is owned by all the international community. This guy is
not
> a radio amateur and never been an amateur one day. Being an amateur is
not
> just a piece of paper to hang on the wall...I even doubt he ever had one!

> Radio amateurs are the people who made the radio spectrum worth these
> billions of dollars he is talking about and they will continue to add
> value to it whether he likes it or not.
>
>
> I noticed that after the Internet has become that popular...a lot of
> simple minded half-knowledged and let me say "untrue" amateurs fall in
the
> dilemma of asking themselves "if it is so easy and funny to use the
internet to
> communicate with other people..why to go thru all the fuss of amateur
radio?".
> They ignore that the Internet as well as all the modern communications
avenues
> are merely branches on the road paved by amateur radio and radio amateurs

> during their history. In other words all are coming out from the cloak of
> amateur radio. Anyway, it needs to be a radio amateur first to understand

> that amateur radio is not the "simple enjoyment ..of talking on the
radio".
>
> -----
>
> Hossam El Shenawy, SU1HM
> Network Manager,
> Egypt Radio Amateurs Assembly
>
> email(alias): SU1HM@amsat.or

>
>

12. All of us.

From: Rick Smith <rick@janrix.com>
Date: Mon, 03 Feb 1997 00:03:40 -0500
To: sts@ac.net
Cc: larryj@cetlink.net, kb6zvp@aol.com, elindquist@arrrl.org,
amsat-bb@amsat.org, netsig@tapr.org, tapr-bb@tapr.org, hgsig@tapr.org,
bbssig@tapr.org, fbb@f6fbb.org, onemm@cetlink.net
Message-ID: <32F571AC.5F6B@janrix.com>
Rendered body type: text/plain

Let us not forget that as one of us said, the rf is for the world and not just a few of us. In my work i find that many times i will be doing the same type of set up on wire or rf, and on the wire it is all ways for the company, on rf some times i get to play, and even help others, Ham Radio is not to make money but to learn and grow, And Even have Fun, yes the

F word is out there. I have a lot of fun running a packet server and the nodes that go with it. Lets take jean, fbb there, i wish i had been the one to put out the program that so many of us use now, but i dont hate him for doing it, I just wish i could get the code for it to study it and maybe learn some more. Mark, kb6zvp, may have started someting with the kill the code, Now what i wish is that they would test on the stuff i like, Im not big into the code, as its slow and I dont hear to good any more, to many guns going off in my face,hihi, Many out there have a lot to give to others, others that wish to learn, so lets try that, The internet is not packet and Packet is not the internet, i run both, but i use each for what it was ment to do, and do not try to mix them up.. Oh by the way its great hearing each of you talking from the heart, or what ever,, have fun and keep it up..
rick

kc4wpg@kc4wpg.#fay.nc.usa.noam

--

Rick Smith
System Administrator
JanRix, Inc.
Fayetteville, N.C. 28303
(910) 868-8777

13. Re: The ARRL Letter Vol 16, No 5

From: "Jean-Paul ROUBELAT" <jpr@f6fbb.org>
Date: Mon, 3 Feb 1997 07:21:20 +0100
To: "Radio Amateurs Assembly - RAA" <radioass@idsc.gov.eg>,
"Thomas Ringate" <ThomasLRingate@ij.net>
Cc: <larryj@cetlink.net>, <KB6ZVP@aol.com>, <elindquist@arrrl.org>,
<amsat-bb@amsat.org>, <netsig@tapr.org>, <tapr-bb@tapr.org>,
<hfsig@tapr.org>, <bbssig@tapr.org>, <fbb@f6fbb.org>,
<rick@janrix.com>, <onemm@cetlink.net>
Message-ID: <199702030702.IAA06404@aris1.eb3ago.org>
Rendered body type: text/plain

Hi All,

I'm sorry but fbb mailing list is devoted to FBB technical usage. This list is not well adapted to your debate.

Please remove the address fbb@f6fbb.org from your list.

Thank-you.

73s

Jean-Paul ROUBELAT, jpr@f6fbb.org

> De : Radio Amateurs Assembly - RAA <radioass@idsc.gov.eg>
> A : Thomas Ringate <ThomasLRingate@ij.net>
> Cc : larryj@cetlink.net; KB6ZVP@aol.com; elindquist@arrrl.org;
amsat-bb@amsat.org; netsig@tapr.org; tapr-bb@tapr.org; hfsig@tapr.org;
bbssig@tapr.org; fbb@f6fbb.org; rick@janrix.com; onemm@cetlink.net
> Objet : Re: The ARRL Letter Vol 16, No 5

> Date : lundi 3 février 1997 07:23
 >
 > Hi folks!
 >
 > What is this guy saying!
 >
 > First it seemed to be a "national" war between fellows of the ARRL on the
 > code issue. On the sudden, he came with this ingenious idea of selling
 the
 > amateur spectrum and abolishing amateur radio!
 >
 > What a joke! He forgot that the amateur spectrum is not a property of the

 > USA or any other single country to ask for "presenting it in an national
 > election"! It is owned by all the international community. This guy is
 not
 > a radio amateur and never been an amateur one day. Being an amateur is
 not
 > just a piece of paper to hang on the wall...I even doubt he ever had one!

 > Radio amateurs are the people who made the radio spectrum worth these
 > billions of dollars he is talking about and they will continue to add
 > value to it whether he likes it or not.
 >
 >
 > I noticed that after the Internet has become that popular...a lot of
 > simple minded half-knowledged and let me say "untrue" amateurs fall in
 the
 > dilemma of asking themselves "if it is so easy and funny to use the
 internet to
 > communicate with other people..why to go thru all the fuss of amateur
 radio?".
 > They ignore that the Internet as well as all the modern communications
 avenues
 > are merely branches on the road paved by amateur radio and radio amateurs

 > during their history. In other words all are coming out from the cloak of
 > amateur radio. Anyway, it needs to be a radio amateur first to understand

 > that amateur radio is not the "simple enjoyment ..of talking on the
 radio".
 >
 > -----
 >
 > Hossam El Shenawy, SU1HM
 > Network Manager,
 > Egypt Radio Amateurs Assembly
 >
 > email(alias): SU1HM@amsat.or
 >

14. Re: [NETSIG:3111] Re: The ARRL Letter Vol 16, No 5

From: "Thomas A. Moulton" <w2vy@gte.net>
 Date: Mon, 03 Feb 1997 06:14:25 -0500
 To: netsig@tapr.org
 Message-ID: <32F5C891.48BE@gte.net>
 Rendered body type: text/plain

Larry W. Johnson wrote:

>
 > Hello Hossam,
 >
 > Unfortunately this guy appears to have a current ham ticket, he did not
 > sign his Call but as near as I can figure He is K0ZXF currently living in
 > Tampa,Florida.
 >
 > I can't believe he has been a Ham for that long and has always had those
 > feelings about the hobby.If he has I guess we can consider a true
 > hippocrite.
 >

I know K0ZXF and I know an Email address that IS his and I have asked
 him to verify
 that he sent the other email.

15. Re: The ARRL Letter Vol 16, No 5

From: edo24@juno.com (Edward J O'Connor)
 Date: Mon, 03 Feb 1997 13:09:38 EST

To: netsig@tapr.org
Cc: kstovel@worldnet.att.net, w2us@worldnet.att.net
Message-ID: <19970203.131607.6702.0.edo24@juno.com>
Rendered body type: text/plain

Larry Johnson has his head in the sand, or someplace else, when he urges the selling of frequencies now used by radio amateurs.

He conveniently forgets the innumerable scientists, engineers, technicians, computer gurus, astronauts, and nobel laureates who cut their teeth on ham radio.

Now when research funding is cut to the bone it is almost treasonable to suggest that any venture that furthers scientific or technical education be eliminated.

There are some who put a price tag on everything. Their poverty of mind leads them to believe that if there is no dollar value there is no value.

Ham frequencies are not the only ones that should not be sold. No frequencies should be <sold>.

If I had ideas like Johnson's I would not sign my call either.

To the rest of the brethren; please forgive my response to this off topic message.

Edward J.O'Connor w2ttm

16. 9600 radios

From: Sid Ashen-Brenner <sashen@midusa.net>
Date: Mon, 03 Feb 1997 18:13:57 -0600
To: netsig@tapr.org
Message-ID: <3.0.32.19970203180933.0068fe6c@midusa.net>
Rendered body type: text/plain

I've recently been given a RCA (Tactel) TAC-200 UHF radio, Model is MCA56CC11C it looks rather like a GE MASTR II, both inside and out Will this radio do 9K6? Does someone out there have one that has been modded? Radio is currently crystaled for the mid 460's, I'd like to put it on 446.100 if it will go 9K6.

The radio was a "gift", provided that I put it to good use!

Sid Ashen-Brenner Salina, Kansas
Internet : sashen@midusa.net
AX-25 : n0obm @ n0obm.#ncks.ks.usa.noam

17. Re: [NETSIG:3114] Re: The ARRL Letter Vol 16, No 5

From: KB6ZVP@aol.com
Date: Fri, 7 Feb 1997 05:43:32 -0500 (EST)
To: netsig@tapr.org
Message-ID: <970207054331_-1710311313@emout06.mail.aol.com>
Rendered body type: text/plain

In a message dated 97-02-03 07:43:56 EST, you write:

<< Larry W. Johnson wrote:

>
> Hello Hossam,
>
> Unfortunately this guy appears to have a current ham ticket, he did not
> sign his Call but as near as I can figure He is K0ZXF currently living in
> Tampa, Florida.
>
> I can't believe he has been a Ham for that long and has always had those
> feelings about the hobby. If he has I guess we can consider a true
> hippocrite.
>

I know K0ZXF and I know an Email address that IS his and I have asked him to verify that he sent the other email.
>>

This part from Mark, kb6zvp@aol.com (write me and I'll verify it):

You wouldn't mind if I used your call and generated some worthless messages that tied up all the list servers would you? You wouldn't mind at all if some of the most respected people in ham radio humiliated you in front of the whole world, would you?

You would mind if I got you banned from all the list servers would you?

Mark

18. The-Net Documentation

From: jack swift <jswift@up.net>
Date: Sat, 15 Feb 1997 09:13:12 -0500
To: netsig@tapr.org
Message-ID: <9702151410.AA00978@btc1>
Rendered body type: text/plain

it wasn't my idea, but suddenly i've become 'responsible' for knowing how to handle nodes running The-Net eeproms. somewhere in the far past i saw the documentation, but now i can't find it.

anyone got a URL?

Jack Swift jswift@up.net N8WAV@W8YY.#UPMI.MI.USA.NA 47.119N 88.572W
Swift True Value Hardware 402 Shelden Ave. Houghton, MI 49931
906-482-0530, 0531, 7766 Alpha Phi Omega Epsilon Lambda Chapter Advisor
Houghton County Amateur Radio Emergency Service Dereliction IS!
Keweenaw Peninsula Chapter American Red Cross CIO/Treasurer Ham It Up!
~~~~~

## 19. Re: [NETSIG:3118] The-Net Documentation

From: "James C. Brost" <jimbo@easyway.net>  
Date: Sun, 16 Feb 1997 02:17:57 -0500  
To: netsig@tapr.org  
Message-ID: <03101600af2c64ec6f35@[207.10.81.59]>  
Rendered body type: text/plain

```
> it wasn't my idea, but suddenly i've become 'responsible' for
> knowing how to handle nodes running The-Net eeproms.
> somewhere in the far past i saw the documentation, but now i can't
> find it.
>
> anyone got a URL?
```

<ftp://ftp.ucsd.edu/hamradio/packet/thenet/>

--  
mailto:jimbo@easyway.net  
http://www.easyway.net/~jimbo

## 20. Re: [NETSIG:3118] The-Net Documentation

From: wb9mjn@wb9mjn.ampr.org  
Date: Mon, 17 Feb 97 12:53:28 UTC  
To: netsig@tapr.org  
Message-ID: <12837@wb9mjn.ampr.org>  
Rendered body type: text/plain

Hi Jack,

I m a ex UPpi , Hi. I actually went to St Ignatious elementary school there in Houghton, for 3rd grade, hi.

I m more into TCPIP now, but helped build the first 9600 baud NETROM node. And many other nodes in the Chicagoland area.

If you need any consultation on how to make a Netrom network work, feel free to Email me. Where i think i can really help out is in network architecture, and conceptual node configuration for durable , reliable routing.

It takes allot of education to get a good handle on this stuff. If u need

a tutor, I will be happy to help.

73, Don.

Mailbox : WB9MJN @ N9HSI.IL.USA.NA  
AMPRNet : wb9mjn@wb9mjn.ampr.org[44.72.98.19]  
Internet: wb9mjn%wb9mjn.ampr.org@uugate.aim.utah.edu

---

## 21. RE-SUBSCRIBE

From: "Lloyd D. Jackson" <ka5dda@1stnet.com>  
Date: Tue, 18 Feb 1997 17:50:53 -0800  
To: <rose-request@rats.org>  
Cc: <w2vy@gte.net>, <netsig@tapr.org>  
Message-ID: <199702190006.SAA17361@mail.lee.1stnet.com>  
Rendered body type: text/plain

Your E-mail Dated 97-01-31 07:27:10

To: netsig@tapr.org      then To; KA5DDA@AOL.COM      Stated that

<Our mailer lost the subscription list for the ROSE Mailing List.>

<Please re-subscribe by sending a message to rose-request@rats.org>  
<or visit our web site <http://www.rats.org/rose>>

I WOULD LIKE TO RE-SUBSCRIBE AT THIS TIME AND HOPE THIS IS ALL THAT NEED TO  
BE DONE. IF FURTHER INFORMATION IS REQUIRED, KINDLY INFORM ME.

Lloyd D. Jackson; 508 Rea St. - P. O. Box 190 ; Mansfield,LA 71052-0190

Lloyd ka5dda@man.1stnet.com

---

# March 1997

Original source file: netsig.9703

Source: [http://ftp.tapr.org/tapr\\_history/SIG\\_Archives/netsig/mail\\_archive/netsig.9703](http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.9703)

## 1. IPGATE.EXE for BPQ

From: dmeredith@phx-az.ampr.org  
Date: Sat, 01 Mar 97 22:27:31 MST  
To: netsig@tapr.org  
Message-ID: <2525@phx-az.ampr.org>  
Rendered body type: text/plain

Hi There,

I'm wondering if anyone has successfully ran IPGATE.EXE along with the G8BPQ node...I have it running but it refuses to work the way the doc's say it does! Argh! For instance, if I enter a route command of  
ROUTE 44.124.20.0/23 \* 1 V

It refuses to take the route...

If I type in ROUTE 44.124.20.0/16 \* 1 V, it takes it as,

44.124.16.0/20 0.0.0.0 1 V

I'm totally perplexed...Help!

Daniel

---

## 2. Re: [NETSIG:3122] IPGATE.EXE for BPQ

From: "Karl F. Larsen" <k5di@acca.nmsu.edu>  
Date: Sun, 2 Mar 1997 08:43:22 -0700 (MST)  
To: netsig@tapr.org  
Message-ID: <199703021543.IAA05468@acca.nmsu.edu>  
Rendered body type: text/plain

At 11:34 PM 3/1/97 -0600, you wrote:

>Hi There,

> I'm wondering if anyone has successfully ran IPGATE.EXE along with the  
>G8BPQ node...I have it running but it refuses to work the way the doc's  
>say it does! Argh! For instance, if I enter a route command of  
>ROUTE 44.124.20.0/23 \* 1 V

>

>It refuses to take the route...

>

>If I type in ROUTE 44.124.20.0/16 \* 1 V, it takes it as,

>

>44.124.16.0/20 0.0.0.0 1 V

>

>I'm totally perplexed...Help!

>

>Daniel

>

>

Dan get really confused and turn off that DOS stuff and load Linux and the ax25 software. Then you will have a \*SYSTEM\*.

73, de Karl aka k5di

Karl F. Larsen Box 74, Mesilla Park, NM 88047 (505) 524-3303  
k5di@k5di.cruces.nm.usa.noam k5di@acca.nmsu.edu k5di@juno.com

---

## 3. Re: IPGATE.XE

From: dmeredith@phx-az.ampr.org  
Date: Sun, 02 Mar 97 11:01:05 MST  
To: netsig@tapr.org  
Message-ID: <2539@phx-az.ampr.org>  
Rendered body type: text/plain

-Dan a route such as 44.124.20.0/16 actually is  
4.124.0.0 - 44.124.255.255 a lot of addresses indeed!  
his encompasses 44.124.20.0 which is why the programme went bonkers!  
o 44.124/16 is the correct way to express it  
lso if all you want is one class c address do this  
4.124.20/24  
his one is 44.124.20.0 - 44.124.20.255  
73 de Jim

-----  
ames C. Moore WU3V



niversity of Southwestern Louisiana  
.O.Box 43650 USL Stn.  
afayette, LA 70510  
-mail jim@usl.edu  
18-893-9455 Home  
18-482-6141 Office  
o-Author of WinCluster32

Jim,

I tried the 44.124.20/24 as well and the IPGATE.EXE won't even accept it as a route...It's IPADDR is 44.124.20.254 Could this be a problem?

Dan

---

#### 4. Maxar Mods.

From: "Dave Ewaldz" <ewaldz@execpc.com>  
Date: Sun, 2 Mar 1997 18:24:56 -6000  
To: ham-digital@ucsd.edu, netsig@tapr.org  
Message-ID: <199703030126.TAA00427@mailgate.execpc.com>  
Rendered body type: text/plain

I've just finished putting up on my web page all of the notes that I have accumulated over the years about modifying the Motorola Maxar/Moxy/Flexar series UHF radios for 9600 baud packet use. I thought this might be of use, as I have seen several inquiries lately regarding these rigs.

Nothing fancy, just the details. The URL is as follows:

<http://www.execpc.com/~ewaldz/maxmods.html>

73 de Dave N9HKM

---

#### 5. Re: [NETSIG:3122] IPGATE.EXE for BPQ

From: Hank Oredson <Hank\_Oredson@MENTORG.COM>  
Date: Mon, 03 Mar 1997 09:52:05 -0800  
To: netsig@tapr.org  
Message-ID: <1.5.4.32.19970303175205.00677460@em-wv03.wv.mentorg.com>  
Rendered body type: text/plain

At 11:34 PM 3/1/97 -0600, you wrote:

>Hi There,

> I'm wondering if anyone has successfully ran IPGATE.EXE along with the  
>G8BPQ node...I have it running but it refuses to work the way the doc's  
>say it does! Argh! For instance, if I enter a route command of  
>ROUTE 44.124.20.0/23 \* 1 V

We have a bunch (well, 4 or 5) nodes with IPGATE running.  
We put all the fixed routing information in the startup file  
(IPGATE.CFG) and everything works exactly as the docs say.

>It refuses to take the route...

>

>If I type in ROUTE 44.124.20.0/16 \* 1 V, it takes it as,

>

>44.124.16.0/20 0.0.0.0 1 V

>

>I'm totally perplexed...Help!

Don't forget the ARP for that route.

Mentor Graphics Library Products Group - "Parts 'R Us!"  
Work: hank\_oredson@mentorg.com Home: H0redson@aol.com  
Work: <http://www.eparts.com> Home: <http://members.aol.com/W0RLI>

---

#### 6. Re: [NETSIG:3123] Re: IPGATE.EXE for BPQ

From: Hank Oredson <Hank\_Oredson@MENTORG.COM>  
Date: Mon, 03 Mar 1997 10:02:05 -0800  
To: netsig@tapr.org  
Message-ID: <1.5.4.32.19970303180205.00680f40@em-wv03.wv.mentorg.com>  
Rendered body type: text/plain

At 09:49 AM 3/2/97 -0600, you wrote:

>At 11:34 PM 3/1/97 -0600, you wrote:

>>Hi There,

>> I'm wondering if anyone has successfully ran IPGATE.EXE along with the  
>>G8BPQ node...I have it running but it refuses to work the way the doc's

```
>>say it does! Argh! For instance, if I enter a route command of
>>ROUTE 44.124.20.0/23 * 1 V
>>
>>It refuses to take the route...
>>
>>If I type in ROUTE 44.124.20.0/16 * 1 V, it takes it as,
>>
>>44.124.16.0/20 0.0.0.0 1 V
>>
>>I'm totally perplexed...Help!
>>
>>Daniel
>>
>>
>      Dan get really confused and turn off that DOS stuff and load Linux
>and the ax25 software. Then you will have a *SYSTEM*.
```

Karl, of what earthly use is the above comment?  
I did not see the term "DOS" in the original message anywhere.

You make a silly assumption, and then show your ignorance by suggesting that the person who wrote the message does not have the smarts to make up their own mind about which OS to use. Oh ... you also failed to answer their question, or even give any hints ...

Now for the hint: try putting the info into IPGATE.CFG, and make sure to include the ARP needed for the route in question.

Hmmm ... you would have to do EXACTLY THE SAME in Linux Karl!

Mentor Graphics Library Products Group - "Parts 'R Us!"  
Work: hank\_oredson@mentorg.com Home: H0redson@aol.com  
Work: <http://www.eparts.com> Home: <http://members.aol.com/W0RLI>

---

## 7. Re: [NETSIG:3125] Maxar Mods.

From: "Charles E. Gelm" <gelmc@erinet.com>  
Date: Thu, 20 Mar 1997 10:53:55 -0800  
To: netsig@tapr.org  
Message-ID: <333187C3.353D@erinet.com>  
Rendered body type: text/plain

Dave Ewaldz wrote:

```
>
> I've just finished putting up on my web page all of the notes that I
> have accumulated over the years about modifying the Motorola
> Maxar/Moxy/Flexar series UHF radios for 9600 baud packet use. I
> thought this might be of use, as I have seen several inquiries lately
> regarding these rigs.
>
> Nothing fancy, just the details. The URL is as follows:
>
> http://www.execpc.com/~ewaldz/maxmods.html
>
> 73 de Dave N9HKM
```

Hi, Dave:

I went to the above www address and my netscape v2.02 crashed.  
I went three (3) times and netscape crashed three (3) times.  
My report was:

```
Application Error
NETSCAPE caused a General Protection Fault
in module USER.EXE at 000B:009B
[CLOSE]
```

Could you email me your maxmods.html file ?

73, Chuck

---

## 8. Re: [NETSIG:3128] Re: Maxar Mods.

From: mcduffie@800netlink.net (800 Netlink)  
Date: Thu, 20 Mar 1997 18:18:31 GMT  
To: netsig@tapr.org  
Message-ID: <33317f0e.40856894@207.215.175.66>  
Rendered body type: text/plain

On Thu, 20 Mar 1997 10:07:34 -0600 (CST), you said:

> Dave Ewaldz wrote:

> > <http://www.execpc.com/~ewaldz/maxmods.html>

> > 73 de Dave N9HKM

> I went to the above www address and my netscape v2.02 crashed.

> I went three (3) times and netscape crashed three (3) times.

> My report was:

>       Application Error

> NETSCAPE caused a General Protection Fault

> in module USER.EXE at 000B:009B

>       [CLOSE]

> Could you email me your maxmods.html file ?

I just tried the same url and got in the first time. For what it's worth.  
;)

Gary

---

## 9. 1997 ARRL/TAPR DCC Announcement - forwarded message from Greg Jones

From: Dino Darling <dinod@deltanet.com>  
Date: Thu, 20 Mar 1997 15:51:21 -0800  
To: tapr-tnc@tapr.org  
Cc: netsig@tapr.org, ss@tapr.org  
Message-ID: <1.5.4.32.19970320235121.006909ac@mail.deltanet.com>  
Rendered body type: text/plain

>  
>1997 ARRL and TAPR Digital Communications Conference  
>October 10-12, 1997  
>Baltimore, Maryland (minutes from BWI airport)  
>  
>Web: <http://www.tapr.org/dcc>

With respect to TAPR and its members, Maryland is too far! What ever happened to La Vegas? Why not Dayton (not the same time as the Dayton Hamvention!)? Dayton is at least central to the US packet community.

I understand there are many good Digital Operators on the east coast and Maryland will serve them well, but it is expensive for us on the left coast!

Dino Darling...KC6RIX  
TAPR Member #3685 / ARRL Member  
dinod@deltanet.com

---

## 10. Re: [NETSIG:3130] 1997 ARRL/TAPR DCC Announcement - forwarded message from Greg

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>  
Date: Thu, 20 Mar 1997 18:19:57 -0600  
To: netsig@tapr.org  
Message-ID: <v03020769af5781be64da@[208.134.134.40]>  
Rendered body type: text/plain

Dino,

as has been stated from the beginning of the joint meeting process between the ARRL and TAPR, the location of the DCC moves from East Coast to West Coast. Texas '95, Washington '96, now Maryland in '97. Next year a site in the central part of the US will be picked, the year after that it will be in the West again, and then back to the East coast.

Thus, someone last year was probably saying this same thing about Washington state who lived on the East coast.

In this fashion, if you don't want to fly -- and BWI is not all the expensive to get in and out of -- then you pass on this year and wait for it to move a little closer until it gets back around to your part of the US. Most of us just budget that is is going to cost money to fly to it no matter where it is and every year the airfare is different anyways -- not dependent on distance.

This is a fair solution to all TAPR and ARRL members alike who want to attend the conference.

Air fare is cheap. I flew from DFW to BWI for \$175 a month ago. Out of

all the airports in that part of the US, BWI has some of the best prices for getting in and out of. If you made reservations now -- while the prices are still in flux you might find a pretty low cost ticket....or like many us -- use those advantage miles.

As to Las Vegas. Seattle was the replacement for Las Vegas in 1996. As was reported in the PSR last year, after checking on hotel locations and availability for Las Vegas, ARRL and TAPR couldn't afford to hold the conf there. If we had wanted to hold the conf in the middle of the week, they were all setup to afford what we could meet, but holding the conf on the weekend in Las Vegas was not possible. Meeting space was a full price on the weekends.

If you want it local, the best solution is to become a local co-host.

Cheers - Greg

```
>>
>>1997 ARRL and TAPR Digital Communications Conference
>>October 10-12, 1997
>>Baltimore, Maryland (minutes from BWI airport)
>>
>>Web: http://www.tapr.org/dcc
>
>With respect to TAPR and its members, Maryland is too far! What ever
>happened to La Vegas? Why not Dayton (not the same time as the Dayton
>Hamvention!)? Dayton is at least central to the US packet community.
>
>I understand there are many good Digital Operators on the east coast and
>Maryland will serve them well, but it is expensive for us on the left
>coast!
>
>Dino Darling...KC6RIX
>TAPR Member #3685 / ARRL Member
>dinod@deltanet.com
```

```
-----
Greg Jones, WD5IVD
Austin, Texas
wd5ivd@tapr.org
http://www.tapr.org/~wd5ivd
-----
```

---

## 11. Re: [NETSIG:3131] Re: 1997 ARRL/TAPR DCC Announcement - forwarded

```
From: "Karl F. Larsen" <k5di@acca.nmsu.edu>
Date: Thu, 20 Mar 1997 19:43:13 -0700 (MST)
To: netsig@tapr.org
Message-ID: <199703210243.TAA12083@acca.nmsu.edu>
Rendered body type: text/plain
```

What ever happened to Tucson in the early spring when the warm sun was good and the meeting place was nice. Seems to me the T in TAPR stands for something, but been so long I forget what.

At 06:30 PM 3/20/97 -0600, you wrote:

```
>Dino,
>
>as has been stated from the beginning of the joint meeting process between
>the ARRL and TAPR, the location of the DCC moves from East Coast to West
>Coast. Texas '95, Washington '96, now Maryland in '97. Next year a site in
>the central part of the US will be picked, the year after that it will be
>in the West again, and then back to the East coast.
>
>Thus, someone last year was probably saying this same thing about
>Washington state who lived on the East coast.
>
>In this fashion, if you don't want to fly -- and BWI is not all the
>expensive to get in and out of -- then you pass on this year and wait for
>it to move a little closer until it gets back around to your part of the
>US. Most of us just budget that is is going to cost money to fly to it no
>matter where it is and every year the airfare is different anyways -- not
>dependent on distance.
>
>This is a fair solution to all TAPR and ARRL members alike who want to
>attend the conference.
```

>  
>Air fare is cheap. I flew from DFW to BWI for \$175 a month ago. Out of  
>all the airports in that part of the US, BWI has some of the best prices  
>for getting in and out of. If you made reservations now -- while the  
>prices are still in flux you might find a pretty low cost ticket....or like  
>many us -- use those advantage miles.  
>  
>As to Las Vegas. Seattle was the replacement for Las Vegas in 1996. As  
>was reported in the PSR last year, after checking on hotel locations and  
>availability for Las Vegas, ARRL and TAPR couldn't afford to hold the conf  
>there. If we had wanted to hold the conf in the middle of the week, they  
>were all setup to afford what we could meet, but holding the conf on the  
>weekend in Las Vegas was not possible. Meeting space was a full price on  
>the weekends.  
>  
>If you want it local, the best solution is to become a local co-host.  
>  
>Cheers - Greg  
>  
>>>  
>>>1997 ARRL and TAPR Digital Communications Conference  
>>>October 10-12, 1997  
>>>Baltimore, Maryland (minutes from BWI airport)  
>>>  
>>>Web: <http://www.tapr.org/dcc>  
>>  
>>With respect to TAPR and its members, Maryland is too far! What ever  
>>happened to La Vegas? Why not Dayton (not the same time as the Dayton  
>>Hamvention!)? Dayton is at least central to the US packet community.  
>>  
>>I understand there are many good Digital Operators on the east coast and  
>>Maryland will serve them well, but it is expensive for us on the left  
>>coast!  
>>  
>>Dino Darling...KC6RIX  
>>TAPR Member #3685 / ARRL Member  
>>[dinod@deltanet.com](mailto:dinod@deltanet.com)  
>  
>  
>-----  
>Greg Jones, WD5IVD  
>Austin, Texas  
>[wd5ivd@tapr.org](mailto:wd5ivd@tapr.org)  
><http://www.tapr.org/~wd5ivd>  
>-----  
>  
>  
>  
73, de Karl aka k5di

Karl F. Larsen Box 74, Mesilla Park, NM 88047 (505) 524-3303  
k5di@k5di.cruces.nm.usa.noam k5di@acca.nmsu.edu

## 12. Re: [NETSIG:3132] Re: 1997 ARRL/TAPR DCC Announcement -

From: "Thomas A. Moulton" <[w2vy@gte.net](mailto:w2vy@gte.net)>  
Date: Fri, 21 Mar 1997 08:45:40 -0500  
To: [netsig@tapr.org](mailto:netsig@tapr.org)  
Message-ID: <33329104.6B55@gte.net>  
Rendered body type: text/plain

Karl F. Larsen wrote:

>  
> What ever happened to Tucson in the early spring when the warm sun  
> was good and the meeting place was nice. Seems to me the T in TAPR stands  
> for something, but been so long I forget what.  
>

At the risk of lowering the [usefull] signal to Noise ratio...

I seem to think that the A in ARRL stands for something too... :)

tom

## 13. Re: Maxar Mods.

From: "Dave Ewaldz" <[dme@ingersoll.com](mailto:dme@ingersoll.com)>  
Date: Fri, 21 Mar 1997 07:57:32 -6000  
To: [netsig@tapr.org](mailto:netsig@tapr.org)  
Message-ID: <199703211401.IAA10965@s3130.ingersoll.com>

Rendered body type: text/plain

```
> From: "Charles E. Gelm" <gelmce@erinet.com>
>
> Dave Ewaldz wrote:
> >
> > I've just finished putting up on my web page all of the notes that I
> > have accumulated over the years about modifying the Motorola
> > Maxar/Moxy/Flexar series UHF radios for 9600 baud packet use. I
> > thought this might be of use, as I have seen several inquiries lately
> > regarding these rigs.
> >
> > Nothing fancy, just the details. The URL is as follows:
> >
> > http://www.execpc.com/~ewaldz/maxmods.html
> >
> > 73 de Dave N9HKM
>
> Hi, Dave:
>
> I went to the above www address and my netscape v2.02 crashed.
> I went three (3) times and netscape crashed three (3) times.
> My report was:
>
>     Application Error
> NETSCAPE caused a General Protection Fault
> in module USER.EXE at 000B:009B
> [CLOSE]
>
> Could you email me your maxmods.html file ?
>
```

Weird! Given my very limited html programming abilities, the page is extremely simple, and should not cause wierdness with any browser.

Sure, I'll email it to you Charles.

Anyone else have problems reading this document?

73 Dave N9HKM

---

#### 14. re: [NETSIG:3134] Re: Maxar Mods.

```
From: rbenny@cbcph.navy.mil
Date: Fri, 21 Mar 97 12:44:48 PST
To: netsig@tapr.org
Message-ID: <vines.zY49++BjAnA@bansmtp.cbcph.navy.mil>
Rendered body type: text/plain
```

I tried your URL, worked fine for me the first time! Good info, Tnx

Ray, N6VR

-----

Original Text

```
From: dme@ingersoll.com, on 21-03-97 9:15 AM:
> From: "Charles E. Gelm" <gelmce@erinet.com>
>
> Dave Ewaldz wrote:
> >
> > I've just finished putting up on my web page all of the notes that I
> > have accumulated over the years about modifying the Motorola
> > Maxar/Moxy/Flexar series UHF radios for 9600 baud packet use. I
> > thought this might be of use, as I have seen several inquiries lately
> > regarding these rigs.
> >
> > Nothing fancy, just the details. The URL is as follows:
> >
> > http://www.execpc.com/~ewaldz/maxmods.html
> >
> > 73 de Dave N9HKM
>
> Hi, Dave:
>
> I went to the above www address and my netscape v2.02 crashed.
> I went three (3) times and netscape crashed three (3) times.
> My report was:
>
>     Application Error
> NETSCAPE caused a General Protection Fault
> in module USER.EXE at 000B:009B
> [CLOSE]
```

>  
> Could you email me your maxmods.html file ?  
>

Weird! Given my very limited html programming abilities, the page is extremely simple, and should not cause wierdness with any browser.

Sure, I'll email it to you Charles.

Anyone else have problems reading this document?

73 Dave N9HKM

---

## 15. Re: [NETSIG:3134] Re: Maxar Mods.

From: Robert <w5robert@blkbox.COM>  
Date: Fri, 21 Mar 1997 15:42:33 -0600 (CST)  
To: netsig@tapr.org  
Message-ID: <9703211542.aa05081@blkbox.COM>  
Rendered body type: text/plain  
  
I read it with win95 and their internet explorer.  
No problem. Gald to see interest in 9600.  
--  
73 Robert W5AJ w5robert@blkbox.com

---

## 16. Re: [NETSIG:3134] Re: Maxar Mods.

From: "Charles E. Gelm" <gelmce@erinet.com>  
Date: Fri, 21 Mar 1997 19:30:35 -0800  
To: netsig@tapr.org  
Message-ID: <3333525B.5CC8@erinet.com>  
Rendered body type: text/plain  
  
Hi, Dave:  
  
I tried 'save as' from my computer with 16 Meg of ram, no problem.  
I guess the 'page' was too large for my 486sx33 with 8 meg of ram.  
:-|  
  
73, Chuck

---

## 17. Re: Publications

From: Sid Ashen-Brenner <sashen@midusa.net>  
Date: Fri, 21 Mar 1997 20:12:25 -0600  
To: netsig@tapr.org  
Message-ID: <3.0.32.19970321201215.006b9288@midusa.net>  
Rendered body type: text/plain  
  
Is there any news on when the book on Radio mods for higher speed packet that has been previously announced might be available?  
  
Sid Ashen-Brenner Salina, Kansas  
Internet : sashen@midusa.net  
AX-25 : n0obm @ n0obm.#ncks.ks.usa.noam

---

## 18. pk900 gateway prob's

From: doug cole <dcole@on-ramp.ior.com>  
Date: Fri, 21 Mar 1997 18:34:14 -0800  
To: netsig@tapr.org  
Message-ID: <1.5.4.16.19970322023414.2f5fe096@on-ramp.ior.com>  
Rendered body type: text/plain  
  
hello to the sig have been getting lots of good info on here as of late but I am going to have to pose a question to the group and see if any of you folks can help me out,  
  
I recently purchased a pk900 with the factory 9600baud modem installed and was hoping to be able to gateway from the 9600 baud port to the 1200 baud port and out to a local bbs, so far the only thing I have been able to do is connect to the gateway and issue a port command which lets me select the 1200 baud port but then when I send a 'c (bbs' call)' the unit comes back with a retry timeout or something and no connection made  
not sure what I am doing wrong maybe someone can help me out on this one as AEA's manual is not too informative....  
  
tnx ahead for any replies or comments  
Doug Cole  
dcole@on-ramp.ior.com

## 19. Re: [NETSIG:3134] Re: Maxar Mods.

From: Sid Ashen-Brenner <sashen@midusa.net>  
Date: Sat, 22 Mar 1997 00:37:43 -0600  
To: netsig@tapr.org  
Message-ID: <3.0.32.19970322003739.006c25f0@midusa.net>  
Rendered body type: text/plain

At 09:15 AM 3/21/97 -0600, you wrote:  
>> >  
>> > http://www.execpc.com/~ewaldz/maxmods.html  
>> >  
>> > 73 de Dave N9HKM  
>>  
>> Hi, Dave:  
>>  
>> I went to the above www address and my netscape v2.02 crashed.  
>> I went three (3) times and netscape crashed three (3) times.  
>> My report was:  
>>  
>> Application Error  
>> NETSCAPE caused a General Protection Fault  
>> in module USER.EXE at 000B:009B  
>> [CLOSE]  
>>  
>> Could you email me your maxmods.html file ?  
>>  
>  
>Weird! Given my very limited html programming abilities, the page is  
>xtremely simple, and should not cause wierdness with any browser.  
>  
>Sure, I'll email it to you Charles.  
>  
>Anyone else have problems reading this document?  
>  
>73 Dave N9HKM

Absolutely NO problem here .... Netscape 3.0  
73 de Sid N00BM

Sid Ashen-Brenner Salina, Kansas  
Internet : sashen@midusa.net  
AX-25 : n0obm @ n0obm.#ncks.ks.usa.noam

---

## 20. Re: [NETSIG:3139] pk900 gateway prob's

From: "Karl F. Larsen" <k5di@acca.nmsu.edu>  
Date: Sat, 22 Mar 1997 05:48:22 -0700 (MST)  
To: netsig@tapr.org  
Message-ID: <199703221248.FAA25455@acca.nmsu.edu>  
Rendered body type: text/plain

I gather the pk900 is a DUAL tnc. Wonder how much it costs? For your problem I am certain you must send the tnc a preliminary message telling it which modem to use. My old KAM was that way.

To "Gateway" between 2 tnc's is easy depending on which operating system your using. If your using DOS, get the G8BPQ Switch and load it as a TSR and it is a great Netrom Gateway.

If your using Unix as I do you will need the ax25 Tools and Utilities. The netrom under Unix is a bit strange. However the author says the G8BPQ Switch is strange software, and his is straight.

At 08:43 PM 3/21/97 -0600, you wrote:  
>  
>  
>hello to the sig have been getting lots of good info on here as of late but  
>I am going to have to pose a question to the group and see if any of you  
>folks can help me out,  
>  
>I recently purchased a pk900 with the factory 9600baud modem installed and  
>was hoping to be able to gateway from the 9600 baud port to the 1200 baud  
>port and out to a local bbs, so far the only thing I have been able to do is  
>connect to the gateway and issue a port command which lets me select the  
>1200 baud port but then when I send a 'c (bbs' call)' the unit comes back  
>with a retry timeout or something and no connection made



>not sure what I am doing wrong maybe someone can help me out on this one as  
>AEA's manual is not too informative....  
>  
>tnx ahead for any replies or comments  
> Doug Cole  
> dcole@on-ramp.ior.com  
> Amateur radio call- N7BFS  
> AMSAT member #26182  
>  
>  
73, de Karl aka k5di

Karl F. Larsen Box 74, Mesilla Park, NM 88047 (505) 524-3303  
k5di@k5di.cruces.nm.usa.noam k5di@acca.nmsu.edu

---

## 21. Re: [NETSIG:3140] Re: Maxar Mods.

From: "Karl F. Larsen" <k5di@acca.nmsu.edu>  
Date: Sat, 22 Mar 1997 06:33:31 -0700 (MST)  
To: netsig@tapr.org  
Message-ID: <199703221333.GAA26082@acca.nmsu.edu>  
Rendered body type: text/plain

At 12:47 AM 3/22/97 -0600, you wrote:  
>At 09:15 AM 3/21/97 -0600, you wrote:  
>>> >  
>>> > <http://www.execpc.com/~ewaldz/maxmods.html>  
>>> >  
>>> > 73 de Dave N9HKM

Snip

Dave I went to your page and using the Clipboard in Win-95 took all  
your MAXTOR data to Word for Windows 6 and then went to the other web page  
and did the same thing with that data.

It's clear that many Hams are having problems with their own setup  
but I can say that your web page is great. There are no problems I could  
detect and I looked.

As usual web page data is too wide for my "normal" format. I must  
either change that or do some re-format work. Big deal...:-)

73, de Karl aka k5di

Karl F. Larsen Box 74, Mesilla Park, NM 88047 (505) 524-3303  
k5di@k5di.cruces.nm.usa.noam k5di@acca.nmsu.edu

---

## 22. Re: [NETSIG:3141] Re: pk900 gateway prob's

From: Mike Curtis <wd6ehr@kaiwan.com>  
Date: Sat, 22 Mar 1997 09:12:17 -0800 (PST)  
To: netsig@tapr.org  
Message-ID: <Pine.SUN.3.95.970322091046.17497C-100000@kaiwan009.kaiwan.com>  
Rendered body type: text/plain

> >I recently purchased a pk900 with the factory 9600baud modem installed and  
> >was hoping to be able to gateway from the 9600 baud port to the 1200 baud  
> >port and out to a local bbs, so far the only thing I have been able to do is  
> >connect to the gateway and issue a port command which lets me select the  
> >1200 baud port but then when I send a 'c (bbs' call)' the unit comes back  
> >with a retry timeout or something and no connection made  
> >not sure what I am doing wrong maybe someone can help me out on this one as  
> >AEA's manual is not too informative....

I don't know how AEA TNCs do this, but with the KAM, you need to use  
"xconnect" to crossband.

-- mike

---

## 23. Re: Maxar mods

From: "Dave Ewaldz" <dme@ingersoll.com>  
Date: Sat, 22 Mar 1997 11:45:24 -6000  
To: netsig@tapr.org  
Message-ID: <199703221749.LAA03300@s3130.ingersoll.com>  
Rendered body type: text/plain

Ok everybody,

I think I fixed the offending syntax problem in my page. There was a slight booboo on my part. Anyone who had problems, please try it again as it should work now. Thanks all for the help.

<http://www.execpc.com/~ewaldz/maxmods.html>

If anyone else has a web page up with similar commerical rig mods documents, please contact me and I'll add a link to your page from mine.

73,  
Dave N9HKM

---

## 24. Re: [NETSIG:3143] Re: pk900 gateway prob's

From: doug cole <dcole@on-ramp.ior.com>  
Date: Sat, 22 Mar 1997 16:16:57 -0800  
To: netsig@tapr.org  
Message-ID: <1.5.4.16.19970323001657.1b17ef16@on-ramp.ior.com>  
Rendered body type: text/plain

tnx for the reply but I am hoping to get areply from someone who has a pk900 as opposed to the kam series of units as they are apples and oranges in the pk900 the command is xgateway on and this part works what doesn't work is when I try to connect to another station through the gateway , it gives me a retry count exxceeded and disconnects ,I am going to hopefully spend some time this weekend on the unit but thought that maybe someone might have a simple answer

tnx again anyway  
73's

Doug Cole  
dcole@on-ramp.ior.com  
Amateur radio call- N7BFS  
AMSAT member #26182

---

## 25. News on sale of AEA Product Lines

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>  
Date: Sat, 22 Mar 1997 19:12:54 -0600  
To: "TAPR-BB list mailing" <tapr-bb@tapr.org>,  
"NETSIG list mailing" <netsig@tapr.org>,  
"AMSAT BB Mail Group " <amsat-bb@amsat.org>  
Cc: " TAPR SYS " <tapr-sys@tapr.org>  
Message-ID: <v03007802af5a2f56e807@[208.134.134.40]>  
Rendered body type: text/plain

If you have not heard, it was reported on Newsline this weekend that AEA has sold its antenna product line (antennas, analyzers, and testers) to Tempo Research of Vista, California and that Mike Lamb, N7ML, will be taking a position within the new AEA division of Tempo Research.

Timewave of St Paul, Minn (<http://www.timewave.com/>) has purchased the AEA Data Products line and some other products.

Listen to: [#1023](http://www.tapr.org/newsline), time segment:13:25 for more details.

Timewave has a web page up already covering this  
(<http://www.timewave.com/aea.html>)

Here is what that pages says:

March 17, 1997

Timewave is in the final stages of completing the purchase of the data hardware and software product lines of AEA (Advanced Electronic Applications, Inc.). Timewave will offer new product sales as well as warranty service, repair, and firmware upgrades for existing AEA products. It will be several weeks before any of the new products and services begin to be available.

Check the Timewave Web page for further information - it will appear here first!

Please help us by not calling via telephone until we have had a chance to get the new product line and services organized.

Tempo Research Corp. of Vista, CA has acquired the AEA antenna analyzer and antenna product lines. Contact them at 619-599-9677.

-----

-----

Greg Jones, WD5IVD  
Austin, Texas  
wd5ivd@tapr.org  
<http://www.tapr.org/~wd5ivd>  
-----

---

## 26. TAPR Board Election -- Don't forget to vote!

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>  
Date: Sun, 23 Mar 1997 14:05:32 -0600  
To: "APRS SIG list mailing" <aprssig@tapr.org>,  
"DSP-93 Build" <dsp-93@tapr.org>,  
"HF SIG list mailing" <hfsig@tapr.org>,  
"NETSIG list mailing" <netsig@tapr.org>,  
"BBS SIG list mailing" <bbssig@tapr.org>,  
"TAPR/AMSAT DSP" <dsp@tapr.org>,  
"TAPR-BB list mailing" <tapr-bb@tapr.org>,  
TAPR Regional Freq <regional\_freq@tapr.org>,  
"tapr-tnc" <tapr-tnc@tapr.org>, "Spread Spectrum" <ss@tapr.org>  
Message-ID: <v03007814af5b3a76bea5@208.134.134.40>  
Rendered body type: text/plain

### TAPR Board of Directors Elections

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If you are a member of TAPR, don't forget to take the time to vote!

We have four people running for three places, so it could be your vote that determines who is on the TAPR Board of Directors.

Deadline for balloting is March 30th, 1997.

This year, members of TAPR can vote either by mail in ballot or over the Internet using the world wide web. Check your PSR on how to submit your vote via the web.

Don't lose your PSR, because you will need information contained on your mail label. If you have problems using the web system, contact Dorothy at the office and we can look into the issue.

PSRs were mailed on March 5th, so all members should have them by now. If you have not received your PSR, call or send e-mail to the office and request a ballot be sent or request the necessary information to allow you to ballot using the on-line Web page.

\*\*\*\* DEADLINE March 30th! \*\*\*\*

-----

Tucson Amateur Packet Radio  
8987-309 E Tanque Verde Rd #337 \* Tucson, Az \* 85749-9399 \* 817-383-0000

-----  
e-mail: TAPR@TAPR.ORG ftp: ftp.tapr.org web: <<http://www.tapr.org/>>  
-----

---

## 27. Spirit 2 problem

From: Sid Ashen-Brenner <sashen@midusa.net>  
Date: Sun, 23 Mar 1997 19:21:15 -0600  
To: netsig@tapr.org  
Message-ID: <3.0.32.19970323192007.00693fb0@midusa.net>  
Rendered body type: text/plain

I need to change the TNC to Computer speed on my PacComm Spirit 2, unfortunately the page that deals with this jumper is MISSING from my manuals. Can someone out there provide me with the missing info? Jumper #11

Thanks de Sid n0obm

Sid Ashen-Brenner Salina, Kansas  
Internet : sashen@midusa.net  
AX-25 : n0obm @ n0obm.#ncks.ks.usa.noam

---

## 28. Re: [NETSIG:3142] NETSIG digest 603

From: Robert Donnell <rdonnell@eskimo.com>  
Date: Sun, 23 Mar 1997 20:10:10 -0800  
To: netsig@tapr.org  
Message-ID: <3.0.32.19970323200939.006b48c0@204.122.16.4>  
Rendered body type: text/plain  
  
>Date: Fri, 21 Mar 1997 18:34:14 -0800  
>From: doug cole <dcole@on-ramp.ior.com>  
>To: netsig@tapr.org  
>Subject: pk900 gateway prob's  
>Message-ID: <1.5.4.16.19970322023414.2f5fe096@on-ramp.ior.com>  
>

Hi Doug,

I'm a little foggy on this after 3 years, but I used to work at AEA doing customer support. So here goes:

The PK-900 is a dual TNC. Port 1 is usually thought of as the "HF" port, as it's capable of multi-mode operations. Port 2 is packet-only, and (without the 9600 baud modem option) is normally used for 1200 baud packet. To do a 1200/9600 gateway requires using port 2 for the 9600 modem and configuring port 1 for 1200 baud operation on packet.

If you need more help on that, drop me a line directly and I'll cudgel the brain cells some more.

73, Bob

>  
>  
>hello to the sig have been getting lots of good info on here as of late but  
>I am going to have to pose a question to the group and see if any of you  
>folks can help me out,  
>  
>I recently purchased a pk900 with the factory 9600baud modem installed and  
>was hoping to be able to gateway from the 9600 baud port to the 1200 baud  
>port and out to a local bbs, so far the only thing I have been able to do is  
>connect to the gateway and issue a port command which lets me select the  
>1200 baud port but then when I send a 'c (bbs' call)' the unit comes back  
>with a retry timeout or something and no connection made  
>not sure what I am doing wrong maybe someone can help me out on this one as  
>AEA's manual is not too informative....  
>  
>tnx ahead for any replies or comments  
> Doug Cole  
> dcole@on-ramp.ior.com  
> Amateur radio call- N7BFS  
> AMSAT member #26182

-----  
Bob Donnell, KD7NM      bob@kd7nm.ampr.org      rdonnell@eskimo.com  
Western Washington Amateur IP Address Coordinator      (206) 775-3651  
-----http://wetnet.wa.com/~kd7nm-----

---

## 29. Re: [NETSIG:3146] News on sale of AEA Product Lines

From: "Terry A. Cox" <tacox@fedex.com>  
Date: Mon, 24 Mar 1997 07:41:58 -0600  
To: netsig@tapr.org  
Message-ID: <199703241347.AA16964@gateway.fedex.com>  
Rendered body type: text/plain

Greg, isn't Timewave the folks you had problems with concerning the contract to produce radio kits?

At 07:15 PM 3/22/97 -0600, you wrote:

>If you have not heard, it was reported on Newsline this weekend that AEA  
>has sold its antenna product line (antennas, analyzers, and testers) to  
>Tempo Research of Vista, California and that Mike Lamb, N7ML, will be  
>taking a position within the new AEA division of Tempo Research.  
>  
>Timewave of St Paul, Minn (<http://www.timewave.com/>) has purchased the AEA  
>Data Products line and some other products.  
>  
>

>Listen to: [#1023](http://www.tapr.org/newsline), time segment:13:25 for more  
>details.  
>  
>  
>Timewave has a web page up already covering this  
>(<http://www.timewave.com/aea.html>)  
>  
>Here is what that pages says:  
>  
>March 17, 1997  
>  
>Timewave is in the final stages of completing the purchase of the data  
>hardware and software product lines of AEA (Advanced Electronic  
>Applications, Inc.). Timewave will offer new product sales as well as  
>warranty service, repair, and firmware upgrades for existing AEA products.  
>It will be several weeks before any of the new products and services begin  
>to be available.  
>  
>Check the Timewave Web page for further information - it will appear here  
>first!  
>  
>Please help us by not calling via telephone until we have had a chance to  
>get the new product line and services organized.  
>  
>Tempo Research Corp. of Vista, CA has acquired the AEA antenna analyzer and  
>antenna product lines. Contact them at 619-599-9677.  
>  
>-----  
>  
>-----  
>Greg Jones, WD5IVD  
>Austin, Texas  
>[wd5ivd@tapr.org](mailto:wd5ivd@tapr.org)  
><http://www.tapr.org/~wd5ivd>  
>-----  
>  
>  
>  
>  
Terry A. Cox, Chief Engineer, Data Network Engineering  
Mail Addr: PO Box 727, MD 2811, Memphis, TN 38194-2811  
Phys Addr: 2828 Business Park Dr., Memphis, TN 38118  
Work Numbers Voice:(901) 375-6690 FAX: (901) 375-6009  
  
EMC2: COX/TERRY E-Mail: [tacox@fedex.com](mailto:tacox@fedex.com)  
Ham BBS: KB4KA @W4BS.#WESTN.TN.USA.NOAM  
ROSE PBBS: KB4KA-10 V K4VVM-3,901372/145.67 (1200)  
DXCluster: KB4KA @KB4KA on 144.97 direct or via Southeast  
PacketCluster Network

### 30. Re: [NETSIG:3150] Re: News on sale of AEA Product Lines

From: "Greg Jones, WD5IVD" <[wd5ivd@tapr.org](mailto:wd5ivd@tapr.org)>  
Date: Mon, 24 Mar 1997 08:24:53 -0600  
To: [netsig@tapr.org](mailto:netsig@tapr.org)  
Message-ID: <[v0300782eaf5c3cea8b22@208.134.134.40](mailto:v0300782eaf5c3cea8b22@208.134.134.40)>  
Rendered body type: text/plain  
  
>Greg, isn't Timewave the folks you had problems with concerning the contract  
>to produce radio kits?  
>

If you mean the company that TAPR had an agreement with in December to  
purchase some 900Mhz radios that TAPR later cancelled for several reasons,  
then that would be Freewave located in Colorado (<http://www.freewave.com>).

Timewave has been around for sometime now in the amateur radio market  
(<http://www.timewave.com>). They have had a booth close to the TAPR booth  
at Dayton for several years. They produce a family of Digital Noise  
Filters, which have been popular in the community. Nice folks.

Personally, I think they should be in a good position to take over the AEA  
data products line. Sounds good for AEA, Timewave, and those of us who  
have AEA products.

Cheers - Greg

-----  
Greg Jones, WD5IVD  
Austin, Texas

wd5ivd@tapr.org  
http://www.tapr.org/~wd5ivd  
-----

---

### 31. Re: [NETSIG:3151] Re: News on sale of AEA Product Lines

From: "Terry A. Cox" <tacox@fedex.com>  
Date: Mon, 24 Mar 1997 09:36:20 -0600  
To: netsig@tapr.org  
Message-ID: <199703241541.AA21585@gateway.fedex.com>  
Rendered body type: text/plain

At 08:29 AM 3/24/97 -0600, you wrote:  
>>Greg, isn't Timewave the folks you had problems with concerning the contract  
>>to produce radio kits?  
TNX for the quick response. Sounds like we surely DO NOT want to get these  
folks confused with each other!!!! 73,  
>>  
>  
>If you mean the company that TAPR had an agreement with in December to  
>purchase some 900Mhz radios that TAPR later cancelled for several reasons,  
>then that would be Freewave located in Colorado (<http://www.freewave.com>).  
>  
Terry A. Cox, Chief Engineer, Data Network Engineering  
Mail Addr: PO Box 727, MD 2811, Memphis, TN 38194-2811  
Phys Addr: 2828 Business Park Dr., Memphis, TN 38118  
Work Numbers Voice:(901) 375-6690 FAX: (901) 375-6009

EMC2: COX/TERRY E-Mail: tacox@fedex.com  
Ham BBS: KB4KA @W4BS.#WESTN.TN.USA.NOAM  
ROSE PBBS: KB4KA-10 V K4VVM-3,901372/145.67 (1200)  
DXCluster: KB4KA @KB4KA on 144.97 direct or via Southeast  
PacketCluster Network

---

### 32. Help with KPC9612-->Tekk radio

From: Mike Fahmie <MPFahmie@lbl.gov>  
Date: Mon, 24 Mar 1997 09:47:10 -0800  
To: netsig@tapr.org  
Message-ID: <199703241748.JAA01291@mh1.lbl.gov>  
Rendered body type: text/plain

A friend is having difficulties getting a pair of identical Tekk  
KS-1000/KPC-9612 stations to talk to each other at 9600 baud and I offered  
to check out the systems for him. I found near perfect eye patterns out of  
each transmitter and each receiver, but performance was not there. It took  
many retries to move a packet between them.

When I replaced either of the 9612's with my Spirit 2 TNC, everything works  
perfectly! We are obviously overlooking something, probably in the TNC. I  
did hard resets on both TNC's and played with various TxD settings with no  
success. We also played with the internal receive equalization control and  
jumper. He, unfortunately, forgot to bring the TNC schematic so I wasn't  
able to scope the signal through the front end filter and comparator.

I am not familiar with the 9612, but I assume that it is a proven unit and  
is not intrinsically defective, what are we doing wrong?

-Mike-

Mike Fahmie - Advanced Light Source  
Lawrence Berkeley National Laboratory  
(510) 486-4030 - MPFahmie@lbl.gov  
WA6ZTY @ N6EEG

---

### 33. Re: [NETSIG:3148] Spirit 2 problem

From: KB6ZVP@aol.com  
Date: Mon, 24 Mar 1997 14:08:04 -0500 (EST)  
To: netsig@tapr.org  
Message-ID: <970324140802\_1117657331@emout01.mail.aol.com>  
Rendered body type: text/plain

In a message dated 97-03-23 21:28:44 EST, you write:

<< I need to change the TNC to Computer speed on my PacComm Spirit 2,  
unfortunately  
the page that deals with this jumper is MISSING from my manuals. Can  
someone out there provide me with the missing info? Jumper #11  
>>

If you would like, I will scan and email you the page...

73 - Mark

<http://members.aol.com/kb6zvp/kb6zvp.html>

---

### 34. Re: [NETSIG:3153] Help with KPC9612-->Tekk radio

From: wb9mjn@wb9mjn.ampr.org  
Date: Mon, 24 Mar 97 13:19:58 UTC  
To: netsig@tapr.org  
Message-ID: <13416@wb9mjn.ampr.org>  
Rendered body type: text/plain

Hi Mike,

When I m in that situation, I always check the tail timer setting...

73, Don.

Mailbox : WB9MJN @ N9HSI.IL.USA.NA  
AMPRNet : wb9mjn@wb9mjn.ampr.org[44.72.98.19]  
Internet: wb9mjn%wb9mjn.ampr.org@uugate.aim.utah.edu

---

### 35. re: [NETSIG:3148] Spirit 2 problem

From: Daniel Meredith <dmeredith@phx-az.ampr.org>  
Date: Mon, 24 Mar 1997 17:17:22 -0800  
To: netsig@tapr.org  
Message-ID: <BMSMTP859252521@dmeredith@phx-az.ampr.org>  
Rendered body type: text/plain

JP11

11-12 57.6  
13-14 38.4  
15-16 19.2  
17-18 9.6  
19-20 4.8

Hope this helps..

Daniel

> From: Sid Ashen-Brenner <sashen@midusa.net>, on 3/24/97 5:13 PM:  
> I need to change the TNC to Computer speed on my PacComm Spirit 2,  
> unfortunately  
> the page that deals with this jumper is MISSING from my manuals. Can  
> someone out there provide me with the missing info? Jumper #11  
>  
> Thanks de Sid n0obm  
>  
> Sid Ashen-Brenner Salina, Kansas  
> Internet : sashen@midusa.net  
> AX-25 : n0obm @ n0obm.#ncks.ks.usa.noam  
>  
>  
>  
>

-----  
"It's Nice To Be Important, But It's Important To Be Nice."  
Telecom Resources - <http://www.stat.com/catch22/tcom>  
Personal Homepage - <http://www.stat.com/catch22>

---

### 36. Re: [NETSIG:3153] Help with KPC9612-->Tekk radio

From: Chris Sussmann <cmsuss@fullnet.net>  
Date: Tue, 25 Mar 1997 00:15:14 -0600  
To: netsig@tapr.org  
Message-ID: <1.5.4.16.19970325061514.243felba@fullnet.net>  
Rendered body type: text/plain

At 11:50 AM 3/24/97 -0600, you wrote:

>A friend is having difficulties getting a pair of identical Tekk  
>KS-1000/KPC-9612 stations to talk to each other at 9600 baud and I offered  
>to check out the systems for him. I found near perfect eye patterns out of  
>each transmitter and each receiver, but performance was not there. It took  
>many retries to move a packet between them.  
>

Mike,

I run the regular 9612, not the plus and I run the KS-900 and I to was having troubles getting it to talk to another Tekk radio/MFJ combo. One of the radios was off freq just enough to allow connects but no I frames. After we got that fixed we went to adjust the deviation of the 9612 and found that I had to place the jumper (J7) in the high position (both posts) to get the right setting. Witch was almost fully ccw.

Also as an added note...some of the kpc-9612s were a bit flakey...I have heard that serial numbers lower than 1000 require a mod to work correctly. So check the serial numbers and contact Kantronics, they just might have the fix for you.

Good Luck!!  
Chris \* N1UOC  
cmsuss@fullnet.net  
N1UOC@N1UOC.#NCOK.OK.USA.NOAM  
<http://www.harvestcomm.net/personal/cmsuss/eapu.htm>

---

### 37. Re: [NETSIG:3155] Re: Help with KPC9612-->Tekk radio

From: Don Lemke <wb9mjn@wb9mjn.ampr.org>  
Date: Tue, 25 Mar 1997 10:38:43 -0600  
To: netsig@tapr.org  
Message-ID: <3337C319.7F9E@wb9mjn.ampr.org>  
Rendered body type: text/plain

Hi Gary,

When a tnc is used with KISS, there is a KISS parameter called the Tail Timer. Its used to hold PTT on for a short time, while the packet completes transmission. This is neccassary, since there is a process delay between the time the packet takes to be sent to the KISS tnc, and the time the tnc can process the packet out the HDLC (radio side) port.

--

73, Don.

AMPRNet : wb9mjn@wb9mjn.ampr.org[44.72.98.19]  
Internet: wb9mjn%wb9mjn.ampr.org@uugate.aim.utah.edu  
Finger: wb9mjn@wb9mjn.ampr.org

---

### 38. RE:Help with KPC9612-->Tekk radio

From: "Thomas Jim" <thomas\_jim@msah6.cig.mot.com>  
Date: 25 Mar 1997 13:21:38 U  
To: netsig@tapr.org  
Message-ID: <199703251929.0AA10095@po\_box.cig.mot.com>  
Rendered body type: text/plain

At 11:50 AM 3/24/97 -0600, you wrote:

>A friend is having difficulties getting a pair of identical Tekk  
>KS-1000/KPC-9612 stations to talk to each other at 9600 baud and I offered  
>to check out the systems for him. I found near perfect eye patterns out of  
>each transmitter and each receiver, but performance was not there. It took  
>many retries to move a packet between them.  
>

Mike,

I have used the kpc9612 with both TEKK, modified Motorola Mitrek, and Kantronics D410 UHF radios. I have found that between different radios I have had to change tnc jumpers for the audio levels. I have also found best receive performance by changing the tnc jumper to use the adjustable receive signal quality pot instead of a fixed resistance. This changes the RX frequency response. There is a pin on the rear tnc 9600 connector to monitor a voltage level. It should approach 2.9 volts for best receive operation by adjusting that pot. It should be adjusted while listening to the transmit from the oposite radio and adjusted as high in volatge that you can get. I believe it rectifies receive recovered clock pulses to produce the dc voltage. Thus more recovered clock pulses gave more voltage. In the kpc9612 the receive wave-shaping is adjustable, while in other 9600 modems that I have used, the TX wave-shaping is adjustable. I like the kpc912 way best as you can just listen to a node while you make adjustments.

de Jim Thomas - N9M00

---

### 39. Re: [NETSIG:3159] RE:Help with KPC9612-->Tekk radio

From: Mike Fahmie <MPFahmie@lbl.gov>  
Date: Tue, 25 Mar 1997 13:24:48 -0800  
To: netsig@tapr.org



Message-ID: <199703252126.NAA00543@mh1.lbl.gov>

Rendered body type: text/plain

At 01:32 PM 3/25/97 -0600, you wrote:

>

>At 11:50 AM 3/24/97 -0600, you wrote:

>>A friend is having difficulties getting a pair of identical Tekk  
>>KS-1000/KPC-9612 stations to talk to each other at 9600 baud and I offered  
>>to check out the systems for him. I found near perfect eye patterns out of  
>>each transmitter and each receiver, but performance was not there. It took  
>>many retries to move a packet between them.

>>

>Mike,

>I have used the kpc9612 with both TEKK, modified Motorola Mitrek, and  
>Kantronics D410 UHF radios. I have found that between different radios I have  
>had to change tnc jumpers for the audio levels. I have also found best receive  
>performance by changing the tnc jumper to use the adjustable receive signal  
>quality pot instead of a fixed resistance. This changes the RX frequency  
>response. There is a pin on the rear tnc 9600 connector to monitor a voltage  
>level. It should approach 2.9 volts for best receive operation by adjusting  
>that pot. It should be adjusted while listening to the transmit from the  
>opposite radio and adjusted as high in voltage that you can get. I believe it  
>rectifies receive recovered clock pulses to produce the dc voltage. Thus more  
>recovered clock pulses gave more voltage. In the kpc9612 the receive  
>wave-shaping is adjustable, while in other 9600 modems that I have used, the  
>TX wave-shaping is adjustable. I like the kpc912 way best as you can just  
>listen to a node while you make adjustments.  
> de Jim Thomas - N9M00

Tnx,

It is helpful to know the source of the monitored voltage level. I did not  
have the TNC schematic, only the users manual to guide me. I suspect that  
there may be something interfering with the detection process, perhaps high  
frequency noise. When I have the schematic, we may try again, tracing the  
waveforms through the frontend of  
the TNC. The fact remains that each of the two identical systems had no  
difficulty when one of the TNC's was  
exchanged for a Sprit 2. This says that something is right.  
-mike-

Mike Fahmie - Advanced Light Source  
Lawrence Berkeley National Laboratory  
(510) 486-4030 - MPFahmie@lbl.gov  
WA6ZTY @ N6EEG

---

#### 40. Re: [NETSIG:3160] RE:Help with KPC9612-->Tekk radio

From: doug cole <dcole@on-ramp.ior.com>

Date: Wed, 26 Mar 1997 07:46:03 -0800

To: netsig@tapr.org

Message-ID: <1.5.4.16.19970326154603.2827cad4@on-ramp.ior.com>

Rendered body type: text/plain

I got in on the tail end of this thread and am not sure where you are in the  
process but I will give my two cents worth.  
in some of the old low quality radios that I have worked on in the past the  
detector didn't always have good filtering after it to filter out the  
residual IF , so one would build a low pass filter to eliminate the 'noise  
coming through and causing flakey squelch operation , now maybe this radio  
you have does not have very good filtering post-detection and is allowing  
some of this IF to get through and maybe is causing troubles in the tnc ,  
sounds like a good oscilloscope on the output would shed some light on your  
problem ..... good luck  
73's

At 03:29 PM 3/25/97 -0600, you wrote:

>At 01:32 PM 3/25/97 -0600, you wrote:

>>

>>At 11:50 AM 3/24/97 -0600, you wrote:

>>>A friend is having difficulties getting a pair of identical Tekk  
>>>KS-1000/KPC-9612 stations to talk to each other at 9600 baud and I offered  
>>>to check out the systems for him. I found near perfect eye patterns out of  
>>>each transmitter and each receiver, but performance was not there. It took  
>>>many retries to move a packet between them.

>>>

>>Mike,

>>I have used the kpc9612 with both TEKK, modified Motorola Mitrek, and  
>>Kantronics D410 UHF radios. I have found that between different radios I have  
>>had to change tnc jumpers for the audio levels. I have also found best receive  
>>performance by changing the tnc jumper to use the adjustable receive signal  
>>quality pot instead of a fixed resistance. This changes the RX frequency  
>>response. There is a pin on the rear tnc 9600 connector to monitor a voltage

Doug Cole  
dcole@on-ramp.ior.com  
Amateur radio call- N7BFS  
AMSAT member #26182

"NETSIG list mailing"<netsig@tapr.org>  
Message-ID: <v03007803af619489b8f1@[208.134.134.40]>  
Rendered body type: text/plain

All,

The Tech Bench Elmers group in Southern California has added a page for our data link project. We will be tracking our progress through it. Any inputs or developments that you would like to share would be greatly appreciated!

The page is:

<http://www.geocities.com/SiliconValley/2775/>

Look under 10Ghz data link....

73's de W6QS - Don Labriola

---

# April 1997

Original source file: netsig.9704

Source: [http://ftp.tapr.org/tapr\\_history/SIG\\_Archives/netsig/mail\\_archive/netsig.9704](http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.9704)

## 1. Re: [NETSIG:3162] RE:Help with KPC9612-->Tekk radio

From: Mike Fahmie <MPFahmie@lbl.gov>  
Date: Wed, 02 Apr 1997 14:08:29 -0800  
To: netsig@tapr.org  
Message-ID: <199704022210.0AA16202@mh1.lbl.gov>  
Rendered body type: text/plain

>N1UOC said;  
>>Also as an added note...some of the kpc-9612s were a bit flakey...I have  
>>heard that serial numbers lower than 1000 require a mod to work correctly.  
>>So check the serial numbers and contact Kantronics, they just might have the  
>>fix for you.

>One of the units has a suspect s/n, we will check with Kantronics, tnx.

I thought that I should mention that we've contacted Kantronics and they said that they weren't aware of any problem with the older KPC-9612's (with serial numbers less than 1000).

-mike-

Mike Fahmie - Advanced Light Source  
Lawrence Berkeley National Laboratory  
(510) 486-4030 - MPFahmie@lbl.gov  
WA6ZTY @ N6EEG

## 2. Re: [NETSIG:3164] RE:Help with KPC9612-->Tekk radio

From: Chris Sussmann <cmsuss@fullnet.net>  
Date: Thu, 03 Apr 1997 09:36:34 -0600  
To: netsig@tapr.org  
Message-ID: <1.5.4.16.19970403153634.089f2e34@fullnet.net>  
Rendered body type: text/plain

At 04:16 PM 4/2/97 -0600, you wrote:

>  
>>N1UOC said;  
>>>Also as an added note...some of the kpc-9612s were a bit flakey...I have  
>>>heard that serial numbers lower than 1000 require a mod to work correctly.  
>>>So check the serial numbers and contact Kantronics, they just might have the  
>>>fix for you.

>  
>>One of the units has a suspect s/n, we will check with Kantronics, tnx.

>  
>I thought that I should mention that we've contacted Kantronics and they  
>said that they weren't aware of any problem with the older KPC-9612's (with  
>serial numbers less than 1000).

>  
>-mike-

>  
>  
> Mike Fahmie - Advanced Light Source  
> Lawrence Berkeley National Laboratory  
> (510) 486-4030 - MPFahmie@lbl.gov  
> WA6ZTY @ N6EEG  
>  
>

Gee Mike,  
That's funny they fixed mine. I had a receive problem on the 9600 side and they got it all in one visit to the repair shop. Makes me wonder why they told you one thing and me another...

Chris \* N1UOC  
cmsuss@fullnet.net  
N1UOC@N1UOC.#NCOK.OK.USA.NOAM  
<http://www.harvestcomm.net/personal/cmsuss/eapu.htm>

## 3. Re: [NETSIG:3165] RE:Help with KPC9612-->Tekk radio

From: Burt Lang <burt@rocler.qc.ca>  
Date: Thu, 03 Apr 1997 12:26:03 +0000  
To: netsig@tapr.org  
Message-ID: <3343A1DB.B2F@rocler.qc.ca>  
Rendered body type: text/plain

Chris Sussmann wrote:

```
>
> At 04:16 PM 4/2/97 -0600, you wrote:
> >
> >>N1UOC said;
> >>>Also as an added note...some of the kpc-9612s were a bit flakey...I have
> >>>heard that serial numbers lower than 1000 require a mod to work correctly.
> >>>So check the serial numbers and contact Kantronics, they just might have the
> >>>fix for you.
> >
> >>One of the units has a suspect s/n, we will check with Kantronics, tnx.
> >
> >I thought that I should mention that we've contacted Kantronics and they
> >said that they weren't aware of any problem with the older KPC-9612's (with
> >serial numbers less than 1000).
> >
> >-mike-
> >
> >
> > Mike Fahmie - Advanced Light Source
> > Lawrence Berkeley National Laboratory
> > (510) 486-4030 - MPFahmie@lbl.gov
> > WA6ZTY @ N6EEG
> >
> >
> > Gee Mike,
> > That's funny they fixed mine. I had a receive problem on the 9600 side and
> > they got it all in one visit to the repair shop. Makes me wonder why they
> > told you one thing and me another...
> >
> > Chris * N1UOC
> > cmsuss@fullnet.net
> > N1UOC@N1UOC.#NCOK.OK.USA.NOAM
> > http://www.harvestcomm.net/personal/cmsuss/eapu.htm
```

I can name another major TNC manufacturer that does that regularly  
(whenever they don't want to hear the bad news). Why should Kantronics  
be any different!!

Burt VE2BMQ>>>

---

#### 4. Re: [NETSIG:3166] RE:Help with KPC9612-->Tekk radio

From: Hank Oredson <Hank\_Oredson@MENTORG.COM>  
Date: Thu, 03 Apr 1997 10:48:41 -0800  
To: netsig@tapr.org  
Message-ID: <1.5.4.32.19970403184841.006bf078@em-wv03.wv.mentorg.com>  
Rendered body type: text/plain

At 11:25 AM 4/3/97 -0600, lots of folks wrote about the 9612:

```
>> >>>Also as an added note...some of the kpc-9612s were a bit flakey...I have
>> >>>heard that serial numbers lower than 1000 require a mod to work correctly.
>> >>>So check the serial numbers and contact Kantronics, they just might
>> >>>have the
>> >>>fix for you.
>> >
>> >>One of the units has a suspect s/n, we will check with Kantronics, tnx.
>> >
>> >I thought that I should mention that we've contacted Kantronics and they
>> >said that they weren't aware of any problem with the older KPC-9612's (with
>> >serial numbers less than 1000).
```

```
>> That's funny they fixed mine. I had a receive problem on the 9600 side and
>> they got it all in one visit to the repair shop. Makes me wonder why they
>> told you one thing and me another...
```

And lots of other reports of problems with the early 9612's.

I have an early 9612. Late alpha or early beta (before there  
were cabinets available) and it has not had any problems.

We have dozens of them in our network, and do have problems  
from time to time, even with late serial numbers. All problems  
have been minor and retweaking of adjustments has cured them.

However, I'm very very curious exactly WHAT was fixed when you  
had them fixed by Kantronics? Parts replaced? If so, which parts?

One symptom we notice is drift in RX adjustments with time and temperature ... and if there is a fix for this it would be handy to know the details.

Mentor Graphics Library Products Group - "Parts 'R Us!"  
Work: hank\_oredson@mentorg.com Home: H0redson@aol.com  
Work: <http://www.eparts.com> Home: <http://members.aol.com/W0RLI>

---

## 5. RE: Help with KPC9612-->Tekk radio

From: "Thomas Jim" <thomas\_jim@msah6.cig.mot.com>  
Date: 3 Apr 1997 13:18:35 U  
To: netsig@tapr.org  
Message-ID: <199704031928.0AA10392@po\_box.cig.mot.com>  
Rendered body type: text/plain

Thats not entirely true , the early KPC9612, not the plus had an eeprom problem that would cause the tnc to drop out of KISS. They sent replacemts to at least 5 of us here around Chicago, but we had to request the replacement eeproms.

de Jim Thomas N9M00

-----

>N1UOC said;  
>>Also as an added note...some of the kpc-9612s were a bit flakey...I have  
>>heard that serial numbers lower than 1000 require a mod to work correctly.  
>>So check the serial numbers and contact Kantronics, they just might have the  
>>fix for you.

>One of the units has a suspect s/n, we will check with Kantronics, tnx.

>I thought that I should mention that we've contacted Kantronics and they  
>said that they weren't aware of any problem with the older KPC-9612's (with  
>serial numbers less than 1000).

>-mike-

> Mike Fahmie - Advanced Light Source  
> Lawrence Berkeley National Laboratory  
> (510) 486-4030 - MPFahmie@lbl.gov  
> WA6ZTY @ N6EEG

---

## 6. FS: Kantronics D4-10 radio

From: "Mitch, W4OA (ex WA4OSR)" <w4oa@vibroplex.com>  
Date: Thu, 03 Apr 1997 14:43:58 -0600  
To: netsig@tapr.org  
Message-ID: <3344168E.3D85@vibroplex.com>  
Rendered body type: text/plain

i have a d4-10 for sale... email or call me if interested..

mitch, w4oa

--

Felton "Mitch" Mitchell, W4OA email: w4oa@vibroplex.com  
The Vibroplex Co., Inc., 11 Midtown Park, E., Mobile, AL 36606-4141  
800-840-8873 orders, 334-478-8873 info, 334-476-0465 FAX  
Visit our web site at - <http://www.vibroplex.com>

---

## 7. Re: [NETSIG:3169] FS: Kantronics D4-10 radio

From: KS9K Paul Hellenberg <ks9k@contesting.com>  
Date: Thu, 3 Apr 1997 15:52:12 -0600 (CST)  
To: netsig@tapr.org  
Cc: Dave Zeph <zephd@in-motion.net>  
Message-ID: <199704032152.PAA12931@sparc5.truline.com>  
Rendered body type: text/plain

DO tell I am Paul

At 02:52 PM 4/3/97 -0600, you wrote:

>i have a d4-10 for sale... email or call me if interested..

>

>mitch, w4oa

>--

>Felton "Mitch" Mitchell, W4OA email: w4oa@vibroplex.com  
>The Vibroplex Co., Inc., 11 Midtown Park, E., Mobile, AL 36606-4141  
>800-840-8873 orders, 334-478-8873 info, 334-476-0465 FAX  
>Visit our web site at - <http://www.vibroplex.com>

>

>

KS9K@contesting.com Paul Hellenberg  
Tru Line Lithographing Inc. 414 554 7300 X125

---

## 8. Re: [NETSIG:3169] FS: Kantronics D4-10 radio

From: Chris Sussmann <cmsuss@fullnet.net>  
Date: Fri, 04 Apr 1997 00:01:03 -0600  
To: netsig@tapr.org  
Message-ID: <1.5.4.16.19970404060103.094f7a3c@fullnet.net>  
Rendered body type: text/plain

At 02:52 PM 4/3/97 -0600, you wrote:  
>i have a d4-10 for sale... email or call me if interested..  
>  
>mitch, w4oa  
>--  
>Felton "Mitch" Mitchell, W4OA email: w4oa@vibroplex.com  
>The Vibroplex Co., Inc., 11 Midtown Park, E., Mobile, AL 36606-4141  
>800-840-8873 orders, 334-478-8873 info, 334-476-0465 FAX  
>Visit our web site at - <http://www.vibroplex.com>  
>  
>  
Mitch,

I interested...what freq is it running on and how much??

Chris \* N1UOC  
cmsuss@fullnet.net  
N1UOC@N1UOC.#NCOK.OK.USA.NOAM  
<http://www.harvestcomm.net/personal/cmsuss/eapu.htm>

---

## 9. Re: [NETSIG:3171] Re: FS: Kantronics D4-10 radio

From: "Mitch, W4OA" <w4oa@acan.net>  
Date: Fri, 04 Apr 1997 02:09:00 -0600  
To: netsig@tapr.org  
Message-ID: <3344B71C.FA2C202@vibroplex.com>  
Rendered body type: text/plain

Chris Sussmann wrote:  
> Mitch,  
>  
> I interested...what freq is it running on and how much??  
>  
> Chris \* N1UOC  
> cmsuss@fullnet.net  
> N1UOC@N1UOC.#NCOK.OK.USA.NOAM  
> <http://www.harvestcomm.net/personal/cmsuss/eapu.htm>

hi chris...

it is on 446.1 and the stock freq (i can't put my hands on the manual just this minute)... i am asking \$300 + shipping...

mitch, w4oa  
wa4osr@cris.com  
334-476-4100

---

## 10. Setup disk for IBM PC/AT?

From: Steve Stroh <strohs@halcyon.com>  
Date: Sun, 6 Apr 1997 19:37:00 -0700 (PDT)  
To: TAPR Networking SIG Mailing List <netsig@tapr.org>  
Message-ID: <Pine.ULT.3.96.970406193637.12702M-100000@chinook.halcyon.com>  
Rendered body type: text/plain

I've been asked to help resurrect a true blue IBM PC/AT for an elementary school class. This computer would be ideal for their use- they only need a dumb terminal emulator like ProComm to connect to a TNC, and then to a BBS. The PC/AT's battery ran out long ago and thus the PC/AT lost its CMOS setup info, so it can't even boot from a floppy disk at the moment (I'm not sure how I'll work THAT issue), much less from the hard disk.

I'm not aware of anywhere I can GET this disk... IBM's Web site doesn't have it (that I could find- I spent quite a bit of time looking). Can anyone suggest any other utilities that can set up the PC/AT's CMOS RAM?

Thanks for any leads!

Steve N8GNJ  
strohs@halcyon.com

--

## 11. Re: Setup disk for IBM PC/AT

From: "Timothy D. Sivils" <ke6fse@stockton.ke6fse.ampr.org>  
Date: Sun, 6 Apr 1997 20:00:32 -0800  
To: netsig@tapr.org  
Message-ID: <9712@stockton.ke6fse.ampr.org>  
Rendered body type: text/plain

> From: Steve Stroh <strohs@halcyon.com>  
> To: TAPR Networking SIG Mailing List <netsig@tapr.org>  
> Subject: Setup disk for IBM PC/AT?  
>  
> I've been asked to help resurrect a true blue IBM PC/AT for an elementary  
> school class. This computer would be ideal for their use- they only need  
> a dumb terminal emulator like ProComm to connect to a TNC, and then to a  
> BBS. The PC/AT's battery ran out long ago and thus the PC/AT lost its  
> CMOS setup info, so it can't even boot from a floppy disk at the moment  
> (I'm not sure how I'll work THAT issue), much less from the hard disk.  
>  
> I'm not aware of anywhere I can GET this disk... IBM's Web site doesn't  
> have it (that I could find- I spent quite a bit of time looking). Can  
> anyone suggest any other utilities that can set up the PC/AT's CMOS RAM?  
>  
>

The IBM line required a "setup" disk to start from a wiped out state as  
you described.... First you will need to get the "Family" designator, as  
in "PS/2" or similar, and the exact model number from the id tag... Then  
call the people at IBM maintenance (1-800-765-4747)... If they can't  
directly help you, the can refer you to someone that can... At last  
check, IBM is still supplying replacement startup diskettes for their old  
systems, and may ask for a nominal charge to do this....

later...

73 de Tim...

```
*=====*
*  AMPR.NET    ke6fse@stockton.ke6fse.ampr.org      *
*  AX25BBS     ke6fse@ko6ri.#nca.ca.usa.noam        *
*  INTERNET    ke6fse@pacbell.net                  *
*  WWW         http://compucominc.com/~ke6fse       *
*=====*
```

## 12. DSP 232 Modem and BPQ

From: "Gordon Cobb, VE5MQ" <cobb@orion.sk.sympatico.ca>  
Date: Sat, 12 Apr 1997 16:16:55 +0000  
To: netsig@tapr.org  
Message-ID: <199704122212.QAA24670@wombat.sk.sympatico.ca>  
Rendered body type: text/plain

I am trying to get a DSP232 modem (v1.0b) to run with BPQ2.08 and  
FBB 5.15. The ultimate objective is to add a HF port onto VE5RRG, our  
local BBS.

I can successfully run BPQ, and FBB with my personal KAM using  
standard KISS mode. However, using the DSP232 in the same  
configuration, I cannot get it to work with compressed FBB  
forwarding. I get the error "checksum error (checksum of message is  
wrong)". If I turn compressed forwarding off, it will work but that  
is not a good long term solution.  
I have tried the various KISS "extended options" available with the  
DSP232 and BPQ with less success. I get a connect, but no data  
transfer occurring. Eventually it times out.

Does anybody have expereince with getting the DSP232 and BPQ  
working? I would sure like to hear your secret.

```
=====
Gordon Cobb, VE5MQ, Regina Sk
Email: g.cobb@sk.sympatico.ca
      ve5mq@iname.com
Packet: ve5mq@ve5rrg.#scsk.sk.can.noam
=====
```

## 13. MFJ packet only radio node

From: Robert <w5robert@blkbox.COM>  
Date: Sat, 12 Apr 1997 18:34:35 -0500 (CDT)  
To: netsig@tapr.org



Message-ID: <9704121834.aa10872@blkbox.COM>

Rendered body type: text/plain

Just got the MFJ xtal packet only radio.  
Opened the case and installed the 144.93 xtals.  
The radio supports 9600, but comes with the jumpers for 1200.  
Ordered the cable to tnc-2 to radio and plugged it into tiny-2  
from PacCom. Bought a new Eprom for the tiny-2 and burned in  
TheNet Plus node version 2.08(b). Thought B was a later revision  
but the B = backbone. It also stated no real difference except  
what you see with the Node command.

So far works great. On a very low inside antenna testing and making  
sure it's stable as the rig/tnc/PS will be up the tower with the  
antenna. (that's another story....) It's already to support 9600  
with addition of modem in the tiny-2.

--

73 Robert W5AJ w5robert@blkbox.com

---

#### 14. Re: [NETSIG:3176] MFJ packet only radio node

From: "Karl F. Larsen" <k5di@acca.nmsu.edu>

Date: Sun, 13 Apr 1997 05:19:48 -0600 (MDT)

To: netsig@tapr.org

Message-ID: <199704131119.FAA14755@acca.nmsu.edu>

Rendered body type: text/plain

Hi Robert,

That is interesting info. Please let us know how things work when you get  
the 9600 baud modem. I have been using a TEK radio on 445.1 MHz for 5 years  
now and it is still running well. The Tiny-2 with a modem makes a nice  
package, and the TEK radio is taped to the tnc...:\_}

At 06:35 PM 4/12/97 -0500, you wrote:

>Just got the MFJ xtal packet only radio.

>Opened the case and installed the 144.93 xtals.

>The radio supports 9600, but comes with the jumpers for 1200.

>Ordered the cable to tnc-2 to radio and plugged it into tiny-2

>from PacCom. Bought a new Eprom for the tiny-2 and burned in

>TheNet Plus node version 2.08(b). Thought B was a later revision

>but the B = backbone. It also stated no real difference except

>what you see with the Node command.

>

>So far works great. On a very low inside antenna testing and making

>sure it's stable as the rig/tnc/PS will be up the tower with the

>antenna. (that's another story....) It's already to support 9600

>with addition of modem in the tiny-2.

>--

>73 Robert W5AJ w5robert@blkbox.com

>

>

73, de Karl aka k5di

Karl F. Larsen Box 74, Mesilla Park, NM 88047 (505) 524-3303  
k5di@k5di.cruces.nm.usa.noam k5di@acca.nmsu.edu

---

#### 15. Re: [NETSIG:3177] Re: MFJ packet only radio node

From: Herb Salls <whftherb@nh.ultranet.com>

Date: Sun, 13 Apr 1997 12:09:12 -0700

To: netsig@tapr.org

Message-ID: <33512F58.1CC9@nh.ultranet.com>

Rendered body type: text/plain

Karl F. Larsen wrote:

>

> Hi Robert,

> That is interesting info. Please let us know how things work when you get  
> the 9600 baud modem. I have been using a TEK radio on 445.1 MHz for 5 years  
> now and it is still running well. The Tiny-2 with a modem makes a nice  
> package, and the TEK radio is taped to the tnc...:\_}

>

Karl, I had heard that the TEKKs were junk and that folks had a hard  
time keeping them tuned, aligned and in service. This is apparently not  
your experience. I wonder why (why not)...

Oh, was it the TEKK 70cm rig or the TEKK 220 rigs that were the  
problem...

Any info appreciated as I am seriously looking into this for our network up here.

---

## 16. Re: [NETSIG:3178] Re: MFJ packet only radio node

From: Sid Ashen-Brenner <sashen@midusa.net>  
Date: Sun, 13 Apr 1997 13:41:36 -0500  
To: netsig@tapr.org  
Message-ID: <3.0.32.19970413134128.006cf614@midusa.net>  
Rendered body type: text/plain

At 12:34 PM 4/13/97 -0500, you wrote:  
>Karl F. Larsen wrote:  
>>  
>> Hi Robert,  
>> That is interesting info. Please let us know how things work when you get  
>> the 9600 baud modem. I have been using a TEK radio on 445.1 MHz for 5 years  
>> now and it is still running well. The Tiny-2 with a modem makes a nice  
>> package, and the TEK radio is taped to the tnc...:\_}  
>>  
>  
>Karl, I had heard that the TEKKs were junk and that folks had a hard  
>time keeping them tuned, aligned and in service. This is apparently not  
>your experience. I wonder why (why not)...  
>  
>Oh, was it the TEKK 70cm rig or the TEKK 220 rigs that were the  
>problem...  
>  
>Any info appreciated as I am seriously looking into this for our network  
>up here.

Running a TEKK KS-960 here, in a controlled environment, with no problems.

73 de Sid

Sid Ashen-Brenner Salina, Kansas  
Internet : sashen@midusa.net  
AX-25 : n0obm @ n0obm.#ncks.ks.usa.noam

---

## 17. Re: [NETSIG:3178] Re: MFJ packet only radio node

From: Hank Oredson <hank\_oredson@MENTORG.COM>  
Date: Sun, 13 Apr 1997 12:39:53 -0800  
To: netsig@tapr.org  
Message-ID: <1.5.4.32.19970413203953.0068cd68@em-wv03.mentorg.com>  
Rendered body type: text/plain

At 12:34 PM 4/13/97 -0500, you wrote:  
>Karl F. Larsen wrote:  
>>  
>> Hi Robert,  
>> That is interesting info. Please let us know how things work when you get  
>> the 9600 baud modem. I have been using a TEK radio on 445.1 MHz for 5 years  
>> now and it is still running well. The Tiny-2 with a modem makes a nice  
>> package, and the TEK radio is taped to the tnc...:\_}  
>>  
>  
>Karl, I had heard that the TEKKs were junk and that folks had a hard  
>time keeping them tuned, aligned and in service. This is apparently not  
>your experience. I wonder why (why not)...  
>  
>Oh, was it the TEKK 70cm rig or the TEKK 220 rigs that were the  
>problem...  
>  
>Any info appreciated as I am seriously looking into this for our network  
>up here.

There are a nummber of different TEKK radios, and the design of each of them varies from time to time.

We have a lot (well, a couple dozen) KS-900s in our network. They work very well, and are very stable. However, we have gotten some xtals that drifted a bit during initial use, and this required several retunings of the radios.

We have a few KS-960s. The early ones did not work at all (without mods) at 9600. Later versions incorporated the mods and work well.

We have 3 or 4 KS-1000s. One arrived DOA (and was replaced) the others have worked well.

Have not used any of the 220 rigs from TEKK yet.

All the radios except 2 or 3 are used with Kantronics TNCs.  
The Data Engine modems have been excellent; no drift, the "just work."  
The KPC-9612 modems are less stable and require recalibration from time to time. Some appear to drift with temperature.  
The remaining 2 or 3 TEKKs are used with modified MFJ-1200B TNCs.  
We have seen little problem with those modems, other than great difficulty getting them initially setup.

Nearly all these radios (and the other radios we use for 9600 mainly D4-10s) are used with yagis on point to point links.

----

Hank Oredson - Mentor Graphics - Library Products Group  
e\_mail: Hank\_oredson@mentorg.com  
Phone: (503) 685-1325 FAX: (503) 685-1599

---

## 18. FS: packet thingies

From: "Mitch, W4OA" <w4oa@vibroplex.com>  
Date: Sun, 13 Apr 1997 23:16:21 -0500  
To: netsig@tapr.org  
Message-ID: <3351AF95.5FCEA2FD@vibroplex.com>  
Rendered body type: text/plain

i recently took down my mobile node of the gulf coast dxcluster backbone... consequently i have several items surplus, and am soliciting offers:

| qty | description                                |
|-----|--------------------------------------------|
| 1   | kantronics 4-10 data radio, 446.1 & 430.55 |
| 1   | kantronics kpc-4 dual port tnc             |
| 2   | kantronics dvr 2-2 data radios             |
| 1   | icom ic-27h radio                          |
| 1   | icom ic-28h radio                          |

if interested, please email...

thanks  
mitch, w4oa

---

## 19. Re: [NETSIG:3180] Re: MFJ packet only radio node

From: Mel Whitten <mel@mo.net>  
Date: Sun, 13 Apr 1997 18:55:54 -0600  
To: netsig@tapr.org  
Message-ID: <3.0.32.19970413185551.006f8080@mo.net>  
Rendered body type: text/plain

My experience with TEKK is much the same as Hank described. The early models worked better with mods and some required new crystals after aging, especially the receiver. Late models have performed well. They have been teamed up with a variety of modems, all performed well but best with the Spirit-2 from PacComm.

Mel, k0pfx

At 02:45 PM 4/13/97 -0500, you wrote:  
>At 12:34 PM 4/13/97 -0500, you wrote:  
>>Karl F. Larsen wrote:  
>>>  
>>> Hi Robert,  
>>> That is interesting info. Please let us know how things work when you get  
>>> the 9600 baud modem. I have been using a TEK radio on 445.1 MHz for 5  
years  
>>> now and it is still running well. The Tiny-2 with a modem makes a nice  
>>> package, and the TEK radio is taped to the tnc...:\_}  
>>>  
>>  
>>Karl, I had heard that the TEKKs were junk and that folks had a hard  
>>time keeping them tuned, aligned and in service. This is apparently not  
>>your experience. I wonder why (why not)...  
>>  
>>Oh, was it the TEKK 70cm rig or the TEKK 220 rigs that were the  
>>problem...  
>>  
>>Any info appreciated as I am seriously looking into this for our network  
>>up here.  
>  
>There are a nummber of different TEKK radios, and the design of each

>of them varies from time to time.  
>  
>We have a lot (well, a couple dozen) KS-900s in our network.  
>They work very well, and are very stable.  
>However, we have gotten some xtals that drifted a bit during initial  
>use, and this required several retunings of the radios.  
>  
>We have a few KS-960s. The early ones did not work at all (without  
>mods) at 9600. Later versions incorporated the mods and work well.  
>  
>We have 3 or 4 KS-1000s. One arrived DOA (and was replaced) the others  
>have worked well.  
>  
>Have not used any of the 220 rigs from TEKK yet.  
>  
>All the radios except 2 or 3 are used with Kantronics TNCs.  
>The Data Engine modems have been excellent; no drift, the "just work."  
>The KPC-9612 modems are less stable and require recalibration from  
>time to time. Some appear to drift with temperature.  
>The remaining 2 or 3 TEKKs are used with modified MFJ-1200B TNCs.  
>We have seen little problem with those modems, other than great  
>difficulty getting them initially setup.  
>  
>Nearly all these radios (and the other radios we use for 9600  
>mainly D4-10s) are used with yagis on point to point links.  
>  
>-----  
>Hank Oredson - Mentor Graphics - Library Products Group  
>e\_mail: Hank\_oredson@mentorg.com  
>Phone: (503) 685-1325 FAX: (503) 685-1599  
>  
>  
>

---

## 20. Re: [NETSIG:3176] MFJ packet only radio node

From: "Karl F. Larsen" <k5di@acca.nmsu.edu>  
Date: Mon, 14 Apr 1997 07:01:37 -0600 (MDT)  
To: netsig@tapr.org  
Message-ID: <199704141301.HAA15784@acca.nmsu.edu>  
Rendered body type: text/plain

Hi Robert,

We all got side-tracked talking about the TEKK radios on other bands. What I am interested in is the MFJ Radio on 2 meters running 9600 baud. Your test will be a good one since your using good proven TNC and 9600 baud modem.

I at least will learn a lot. It's high time some users try 9600 baud.

At 06:35 PM 4/12/97 -0500, you wrote:  
>Just got the MFJ xtal packet only radio.  
>Opened the case and installed the 144.93 xtals.  
>The radio supports 9600, but comes with the jumpers for 1200.  
>Ordered the cable to tnc-2 to radio and plugged it into tiny-2  
>from PacCom. Bought a new Eprom for the tiny-2 and burned in  
>TheNet Plus node version 2.08(b). Thought B was a later revision  
>but the B = backbone. It also stated no real difference except  
>what you see with the Node command.  
>  
>So far works great. On a very low inside antenna testing and making  
>sure it's stable as the rig/tnc/PS will be up the tower with the  
>antenna. (that's another story....) It's already to support 9600  
>with addition of modem in the tiny-2.  
>--  
>73 Robert W5AJ w5robert@blkbox.com  
>  
>  
73, de Karl aka k5di

Karl F. Larsen Box 74, Mesilla Park, NM 88047 (505) 524-3303  
k5di@k5di.cruces.nm.usa.noam k5di@acca.nmsu.edu

---

## 21. Re: [NETSIG:3178] Re: MFJ packet only radio node

From: Chuck Hast <wchast@utilpart.com>  
Date: Mon, 14 Apr 1997 08:25:03 -0400  
To: netsig@tapr.org  
Message-ID: <3352302F.775D@utilpart.com>

Rendered body type: text/plain

Herb Salls wrote:

>  
>  
> Karl, I had heard that the TEKKs were junk and that folks had a hard  
> time keeping them tuned, aligned and in service. This is apparently not  
> your experience. I wonder why (why not)...  
>  
> Oh, was it the TEKK 70cm rig or the TEKK 220 rigs that were the  
> problem...  
>  
> Any info appreciated as I am seriously looking into this for our network  
> up here.

We have several TEKK's in service here in the Tampa Bay area, they  
work just fine, most of them have been in service for 3-4 years.

Those and some Motorola Radius radios make up our 9k6 network.

I have found that the key to keeping the TEKK's on channel is to  
use good xtals --- not a real secret of course --- I use International  
Crystal products, and have not had any freq problems.

--  
Chuck Hast  
wchast@utilpart.com

kp4djt

---

## 22. RE: [NETSIG:3181] FS: packet thingies

From: cberg@grayfox.svs.com  
Date: Mon, 14 Apr 97 12:13:36 PDT  
To: netsig@tapr.org  
Message-ID: <Chameleon.970414121442.cberg@napcom.svs.com>  
Rendered body type: text/plain

On Sun, 13 Apr 1997 17:15:21 -0500 (CDT) Mitch, W40A wrote:  
>i recently took down my mobile node of the gulf coast dxcluster  
>backbone... consequently i have several items surplus, and am  
>soliciting offers:  
>  
>        qty                description  
>        1                kantronics 4-10 data radio, 446.1 & 430.55  
>        1                kantronics kpc-4 dual port tnc  
>        2                kantronics dvr 2-2 data radios  
>        1                icom ic-27h radio  
>        1                icom ic-28h radio  
>  
>if interested, please email...  
>  
>thanks  
>mitch, w40a  
>  
>

Mitch,

Would be interested in the D4-10 for \$275 + shipping.

73, Carl K9VXW cberg@svs.com

-----  
Carl Bergstedt K9VXW  
IRA Frequency Coordinator  
E-mail: cberg@svs.com  
Phone 630-420-2409  
Fax 630-420-0405  
US Mail: PO Box 514  
Naperville, IL 60566-0514

---

## 23. Re: [NETSIG:3183] Re: MFJ packet only radio node

From: Mel Whitten <mel@mo.net>  
Date: Mon, 14 Apr 1997 19:19:02 -0600  
To: netsig@tapr.org  
Message-ID: <3.0.32.19970414191901.006fcd9c@mo.net>  
Rendered body type: text/plain

I have had two of the MFJ8621 Data Radios running since about the  
time they were available. I found they work fine, fairly fast turn-around

and work well with TNC2 clones with TAPR or G3RUH modems, Spirits, PK96, & kantronics 9612. I loan them out to give 1200 bauders to taste higher speed.  
Several have purchased them as a result. I was able to obtain a schematic with a request from MFj. The advertised SINAD is a little overstated but sensitivity is adequate. For little over a hundred dollars (Dayton pricing) and for some one who doesn't want to modify a radio for 9K6, the MFj provides a good introduction to 9600 baud.

mel, k0pfx

At 08:06 AM 4/14/97 -0500, you wrote:

>Hi Robert,

>

>We all got side-tracked talking about the TEKK radios on other bands. What I  
>am interested in is the MFJ Radio on 2 meters running 9600 baud. Your test  
>will be a good one since your using good proven TNC and 9600 baud modem.

>

>I at least will learn a lot. It's high time some users try 9600 baud.

>

>

>At 06:35 PM 4/12/97 -0500, you wrote:

>>Just got the MFJ xtal packet only radio.

>>Opened the case and installed the 144.93 xtals.

>>The radio supports 9600, but comes with the jumpers for 1200.

>>Ordered the cable to tnc-2 to radio and plugged it into tiny-2

>>from PacCom. Bought a new Eprom for the tiny-2 and burned in

>>TheNet Plus node version 2.08(b). Thought B was a later revision

>>but the B = backbone. It also stated no real difference except

>>what you see with the Node command.

>>

>>So far works great. On a very low inside antenna testing and making

>>sure it's stable as the rig/tnc/PS will be up the tower with the

>>antenna. (that's another story....) It's already to support 9600

>>with addition of modem in the tiny-2.

>>--

>>73 Robert W5AJ w5robert@blkbox.com

>>

>>

>73, de Karl aka k5di

>

> Karl F. Larsen Box 74, Mesilla Park, NM 88047 (505) 524-3303

> k5di@k5di.cruces.nm.usa.noam k5di@acca.nmsu.edu

>

>

>

---

## 24. address change

From: Kaprocki <fkaprocki@iag.net>

Date: Tue, 15 Apr 1997 16:41:18 -0400

To: netsig@tapr.org

Message-ID: <1.5.4.32.19970415204118.006728b4@iag.net>

Rendered body type: text/plain

Please change my email address OLD kaprocki@iag.net

NEW fkaprocki@iag.net

thanks. kk4rw

---

## 25. New versions for AGW packet programs for WIN95

From: "(SV2AGW) Rossopoulos George" <sv2agw@the.forthnet.gr>

Date: Thu, 17 Apr 1997 18:27:02 +0300

To: <netsig@tapr.org>

Message-ID: <199704171529.5AA12387@info.forthnet.gr>

Rendered body type: text/plain

If you dont know about AGW series of packet programs for WIN95 visit my site for more info and downloads. The Url is <http://www.forthnet.gr/sv2agw/>

1.Now AGWBBS.EXE and AGWFWD.EXE support HTML format messages.The whole operation is auto.AGWFWD when downloads a message scans it for html format.Then the AGWBBS when responds to a read command if the message is html launces your web browser.No need for special titles etc.So simple.

2.AGWPE now has self adjust packet parameters.Auto adjust maxframe,persist,slottime,frack,resp etc depending on channel traffic and link quality.

Rossopoulos George  
e-mail:sv2agw@the.forthet.gr  
packet:SV2AGW@SV2DXC.TSL.GRC.EU  
http://www.forthnet.gr/sv2agw/  
http://www.intranet.gr/isefi/rossopou/rossopou.htm

---

## 26. mfj xtal radio

From: Robert <w5robert@blkbox.COM>  
Date: Thu, 17 Apr 1997 15:21:28 -0500 (CDT)  
To: netsig@tapr.org  
Message-ID: <9704171521.aa15907@blkbox.COM>  
Rendered body type: text/plain

One of the current problems on the radio is the transmitter output seems off by 1 khz. (144.9291 on freq. counter vs. 144.9300 how important is it to correct this?? The adjustable piece inside the coil for transmitter freq. is at the limit (all the way in).

--  
73 Robert W5AJ w5robert@blkbox.com

---

## 27. re: [NETSIG:3189] mfj xtal radio

From: rbenny@cbcph.navy.mil  
Date: Thu, 17 Apr 97 15:41:16 PDT  
To: netsig@tapr.org  
Message-ID: <vines.zY49+AQeJnA@bansmtp.cbcph.navy.mil>  
Rendered body type: text/plain

Robert, I do not know what 1 Kz will do to the reliability of your sytem, but I would suggest that you drop another piece of ferrite bar into the coil and see if that will bring it into range. If you don't have a piece of ferrite, you can use a small bolt. If it does the job, drop some hot candle wax into the coil to keep the new piece in place. This has worked for me!

Good luck, Ray, N6VR

-----  
Original Text  
From: w5robert@blkbox.com, on 17-04-97 3:23 PM:  
One of the current problems on the radio is the transmitter output seems off by 1 khz. (144.9291 on freq. counter vs. 144.9300 how important is it to correct this?? The adjustable piece inside the coil for transmitter freq. is at the limit (all the way in).

--  
73 Robert W5AJ w5robert@blkbox.com

---

## 28. Re: [NETSIG:3190] re: mfj xtal radio

From: Ronnie Hale <w0plw@w0plw.ampr.org>  
Date: Thu, 17 Apr 1997 19:17:45 -0500 (CDT)  
To: netsig@tapr.org  
Message-ID: <Pine.LNX.3.93.970417190111.147E-100000@w0plw-5.ampr.org>  
Rendered body type: text/plain

On Thu, 17 Apr 1997 rbenny@cbcph.navy.mil wrote:

> Robert, I do not know what 1 Kz will do to the reliability of your sytem,  
> but I would suggest that you drop another piece of ferrite bar into the  
> coil and see if that will bring it into range. If you don't have a piece of  
> ferrite, you can use a small bolt. If it does the job, drop some hot candle  
> wax into the coil to keep the new piece in place. This has worked for me!  
>  
> Good luck, Ray, N6VR

Wrong! Stop the music! Putting ferrite in the core will increase the inductance, thereby moving the frequency down. Note that he is already about 1 khz low.

Robert, without knowing the physical structure of the coil, perhaps you can achieve putting it on frequency by moving the slug to the other end of travel (toward the top). Barring that, you may be able to hit up MFJ for a different value padding capacitor, which is likely associated with that variable coil. I don't have a schematic for that radio, so I really don't know the particular layout. If you can't make it reach the

proper frequency by turning the slug the opposite direction, note that a brass slug will have the opposite effect inside the coil.

I wouldn't get too excited about the frequency difference of 1khz or less, as you are probably within the specs of the "other guys on the channel". Unless you have a marginal path, you may not even notice it. My main purpose here was to hopefully get to you before you put in another ferrous slug, then trash the whole project with hot candle wax.

```
> -----
> Original Text
> From: w5robert@blkbox.com, on 17-04-97 3:23 PM:
> One of the current problems on the radio is the
> transmitter output seems off by 1 khz. (144.9291 on freq.
> counter vs. 144.9300 how important is it to correct this??
> The adjustable piece inside the coil for transmitter freq.
> is at the limit (all the way in).
>
> --
> 73 Robert W5AJ w5robert@blkbox.com
>
```

73, Ronnie, w0plw

w0plw@w0plw.ampr.org  
http://w0plw.ampr.org

---

## 29. Re: [NETSIG:3191] re: mfj xtal radio

From: Robert <w5robert@blkbox.COM>  
Date: Fri, 18 Apr 1997 15:23:03 -0500 (CDT)  
To: netsig@tapr.org  
Message-ID: <9704181523.aa21475@blkbox.COM>  
Rendered body type: text/plain

Very good.

The radio is now setup. With changing the xtals to something different than 145.01mhz, some tuning is required. Here's what I did:

Recv: Took the handheld (checked output with counter) and adjusted the receiver test point to the required 2.50 VDC. On freq.

Xmitter: Using the counter - backed out the slug and got the freq. down to 144.93002 which was close enough for me!!

Thanks for reminding me that I was below on frequency and needed to remove some L from the circuit!

The move to a higher antenna should be next week sometime.

TNX agn.

--

73 Robert W5AJ w5robert@blkbox.com

---

## 30. HamWeb Server Software Beta Testing

From: "John A. Hansen" <hansen@ait.fredonia.edu>  
Date: Wed, 23 Apr 1997 21:01:46 -0400  
To: netsig@tapr.org, bbssig@tapr.org  
Message-ID: <335EB0FA.6C83@ait.fredonia.edu>  
Rendered body type: text/plain

Hi Folks,

I have recently completed a beta version of a new packet broadcast protocol server that I am tentatively calling HamWeb. I'm looking for folks who might wish to beta-test it to help with the debugging process. Key features of this software include:

- Packets are transmitted in unconnected mode so they can be received by an unlimited number of stations at the same time.

- File transfers are faster than on traditional connected packet connections because the server need not wait for acknowledgment packets from the clients. Data streams out of the server without interruption.

- The system does not require users to purchase any new hardware. It is capable of transferring up to 20 MB of data per day (assuming 50% compression) at a transmission rate of 1200 baud.

- The client software saves partial files that are received with holes and fills in the holes as the file is retransmitted.

- The client software keeps track of the file modification dates and will update files that have been modified, but ignore files that it has already received and have not been updated.

- Unlike the PACSAT broadcast protocol, the filenames on the



clients are exactly the same as they appear on the server,  
making this an excellent mechanism for distributing HTML files.  
Entire directories and directory structures that reside on  
the server can be replicated exactly on the clients,  
making this an ideal way, for example, for transferring  
files that have been downloaded from the PACSATs, so that  
stations that do not have satellite groundstations  
can still use groundstation programs like WiSP to access  
satellite files.  
Hooks are built into the server to allow other programs, such  
as packet bulletin boards, to kick off server file transfers.  
Files can be specified to be transmitted once, or on a  
continuous loop.

More information on the software can be obtained from:

<http://www.tapr.org/~wa0ptv>

Both server and client software are available along with documentation  
from this page. If you end up trying this, please do drop me a note and  
let me know how it runs for you. I expect to release one more version  
of  
it with added features as soon as I receive feedback from initial  
adopters.

---

### 31. Re: [NETSIG:3193] HamWeb Server Software Beta Testing

From: Greg Jones <wd5ivd@tapr.org>  
Date: Wed, 23 Apr 1997 20:46:45 -0500 (CDT)  
To: netsig@tapr.org  
Message-ID: <199704240146.UAA26760@tapr.org>  
Rendered body type: text/plain

John got the URL a little off -- try:  
<http://www.tapr.org/~wa0ptv/>

Cheers - Greg

>  
> Hi Folks,  
>  
> I have recently completed a beta version of a new packet broadcast  
> protocol server that I am tentatively calling HamWeb. I'm looking  
> for folks who might wish to beta-test it to help with the debugging  
> process. Key features of this software include:  
>  
> Packets are transmitted in unconnected mode so they can be  
> received by an unlimited number of stations at the same time.  
> File transfers are faster than on traditional connected  
> packet connections because the server need not wait for  
> acknowledgment packets from the clients. Data streams  
> out of the server without interruption.  
> The system does not require users to purchase any new hardware.  
> It is capable of transferring up to 20 MB of data per day  
> (assuming 50% compression) at a transmission rate of 1200 baud.  
> The client software saves partial files that are received with  
> holes and fills in the holes as the file is retransmitted.  
> The client software keeps track of the file modification dates  
> and will update files that have been modified, but ignore  
> files that it has already received and have not been updated.  
> Unlike the PACSAT broadcast protocol, the filenames on the  
> clients are exactly the same as they appear on the server,  
> making this an excellent mechanism for distributing HTML files.  
> Entire directories and directory structures that reside on  
> the server can be replicated exactly on the clients,  
> making this an ideal way, for example, for transferring  
> files that have been downloaded from the PACSATs, so that  
> stations that do not have satellite groundstations  
> can still use groundstation programs like WiSP to access  
> satellite files.  
> Hooks are built into the server to allow other programs, such  
> as packet bulletin boards, to kick off server file transfers.  
> Files can be specified to be transmitted once, or on a  
> continuous loop.  
>  
> More information on the software can be obtained from:  
>  
> <http://www.tapr.org/~wa0ptv>  
>  
> Both server and client software are available along with documentation

> from this page. If you end up trying this, please do drop me a note and  
> let me know how it runs for you. I expect to release one more version  
> of  
> it with added features as soon as I receive feedback from initial  
> adopters.  
>  
>

---

## 32. Re: [NETSIG:3193] HamWeb Server Software Beta Testing

From: "Charles Brabham" <n5pvl@texoma.net>  
Date: Thu, 24 Apr 1997 05:17:34 -0500  
To: <netsig@tapr.org>  
Message-ID: <199704241020.FAA19654@mail.texoma.net>  
Rendered body type: text/plain

Today I took a quick look at John Hansen's new HamWeb software, and on the basis of this quick once-over, I'd say that John has really done the amateur radio community proud with his effort.

At this point, HamWeb appears to be very simple to set up and use. The software is simple and elegant enough that it can be used in a variety of ways. The real test will be in the way amateurs choose to use this excellent tool which John has placed at our disposal.

73 DE Charles Brabham, N5PVL  
Packet Radio : N5PVL@N5PVL.#NTX.TX.USA.NA  
E-Mail : n5pvl@texoma.com  
WWW : <http://www.texoma.com/~n5pvl>

---

# May 1997

Original source file: netsig.9705

Source: [http://ftp.tapr.org/tapr\\_history/SIG\\_Archives/netsig/mail\\_archive/netsig.9705](http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.9705)

## 1. Radios for 220 MHz 9600 baud ??

From: Mike Fahmie <MPFahmie@lbl.gov>  
Date: Wed, 07 May 1997 16:14:33 -0700  
To: netsig@tapr.org  
Message-ID: <199705072314.QAA12135@mh1.lbl.gov>  
Rendered body type: text/plain

I need a 220 transceiver in the 25 watt class that I can convert to 9600 baud operation. I guess that I could use a TEKK KS-2000 and an amplifier with an RF sensing TR switch, but I'm afraid that the TR switching delay will compromise the speed of the link (not to mention the wear/tear on the relay). The alternative is a bigger antenna at a mountaintop site that suffers from snow and ice.

Has anyone found gear in this class, I'm not excited about converting a two meter rig to 220, nor do I think that using a two meter rig to drive a 220 transverter is the way to go either. :-)

Tnx,  
-Mike-

Mike Fahmie - WA6ZTY @ N6EEG - MPFahmie@lbl.gov  
Advanced Light Source - Lawrence Berkeley National Laboratory  
=====

"Alas, a Balrog, and I am already weary."  
Galdalf the Wizard - Lord of the Rings  
=====

---

## 2. Re: [NETSIG:3196] Radios for 220 MHz 9600 baud ??

From: chimel@epix.net  
Date: Wed, 07 May 1997 20:06:32 -0700  
To: netsig@tapr.org  
Message-ID: <33714338.27C3@epix.net>  
Rendered body type: text/plain

Hi Mike,

I did not know that TEKK had a 220 unit. I have been selling them at cost for a few years and did not know it. Please update me.

---

## 3. Re: [NETSIG:3197] Re: Radios for 220 MHz 9600 baud ??

From: Mike Fahmie <MPFahmie@lbl.gov>  
Date: Thu, 08 May 1997 09:04:51 -0700  
To: netsig@tapr.org  
Message-ID: <199705081604.JAA02870@mh1.lbl.gov>  
Rendered body type: text/plain

At 08:14 PM 5/7/97 -0500, chimel@epix.net wrote:

>Hi Mike,

>

> I did not know that TEKK had a 220 unit. I have been selling  
>them at cost for a few years and did not know it. Please update me.  
>

The Tekk KS-2000 is a 1 or 2 watt transceiver similar to the KS-960 (I think) but designed for the 220 MHz. band. It came out last year, and is priced about the same as it's UHF cousin. It should accept the same mods that are currently made to the UHF models for 9600/19200 service.

-Mike-

Mike Fahmie - Advanced Light Source  
Lawrence Berkeley National Laboratory  
(510) 486-4030 - MPFahmie@lbl.gov  
WA6ZTY @ N6EEG

---

## 4. unsubscribe

From: Hank Oredson <Hank\_Oredson@MENTORG.COM>  
Date: Thu, 15 May 1997 10:57:50 -0800  
To: netsig@tapr.org  
Message-ID: <3.0.1.32.19970515105750.00692a40@em-wv03.wv.mentorg.com>  
Rendered body type: text/plain

## 5. HAmPS Home Page

From: Marty Albert <marty@trucom.com>  
Date: Fri, 16 May 1997 00:48:57 -0500  
To: packet-pbbs@qsl.net, aprssig@tapr.org, bbssig@tapr.org, hfsig@tapr.org,  
netsig@tapr.org, ss@tapr.org  
Message-ID: <1.5.4.32.19970516054857.0069a7b8@mail.trucom.com>  
Rendered body type: text/plain  
  
This message is to announce the new Heartland AMateur Packet Society (HAmPS)  
Home Page located at URL:

<http://www.geocities.com/CapeCanaveral/Lab/7067>

HAmPS is a group that facilitates packet radio network development with a focus on operations in the Heartland of the United States.

Membership is FREE and open to all interested parties.

Please drop by the HAmPS Home Page for more information.

Take Care & 73

Marty Albert - marty@trucom.com  
Amateur Radio: KC6UFM@KC6UFM.#SEMO.MO.USA.NOAM

Heartland Internet Services

\*\*\*\*\*  
Interested in Amateur Radio?  
<http://www.trucom.com/ppages/marty>  
\*\*\*\*\*

---

## 6. Kiss Commands

From: "John A. Hansen" <hansen@ait.fredonia.edu>  
Date: Thu, 22 May 1997 09:01:03 -0400  
To: netsig@tapr.org  
Message-ID: <3384438F.36A3@ait.fredonia.edu>  
Rendered body type: text/plain

Hi Folks,

It has come to my attention that different models of TNC's seem to have different commands to get them into and out of KISS mode. I'd like to make some software that I've been writing usable by all of the available tnc's with KISS. As a result I'm trying to collect as many of these command sets as possible.

If you have any information on getting specific units into and out of KISS (especially ones like the KPC-3, PK-12, PK-232 etc. etc.), please drop me a note. Thanks in advance.

John WA0PTV  
hansen@ait.fredonia.edu

---

## 7. Re: [NETSIG:3201] Kiss Commands

From: garym@cts.com (Gary Morris)  
Date: Thu, 22 May 1997 10:45:32 -0700  
To: netsig@tapr.org  
Message-ID: <m0wUbvj-0000VYC@crash.cts.com>  
Rendered body type: text/plain  
  
I have command info on the KPC-3, KPC-9612, PK-88 and PK-232 if you want. Oh, also the TAPR 1.1.6 firmware for TNC-2's, which I have installed in a PK-80 (which doesn't normally support KISS, but does with the TAPR firmware).

--GaryM

---

## 8. Re: [NETSIG:3201] Kiss Commands

From: n1kio@gw.n1kio.ampr.org (Tom Saluti (N1KIO))  
Date: Fri, 23 May 97 17:32:24 EST  
To: netsig@tapr.org  
Message-ID: <10933@gw.n1kio.ampr.org.>



## 10. Re: [NETSIG:3204] RE; kiss tncs

From: Phillip Conza <phil@zl2tze.mlb.planet.gen.nz>  
Date: Sat, 24 May 1997 21:30:19 -1200  
To: "(SV2AGW) Rossopoulos George" <sv2agw@the.forthnet.gr>, netsig@tapr.org  
Message-ID: <33881f1c.zl2tze@zl2tze.mlb.planet.gen.nz>  
Rendered body type: text/plain

Hi Guys and Gals,

I Have a small program called SETKISS that puts 6 TNC types into KISS Mode

AEA pk232 pk88  
Kantronics 2.xx  
Kantronics 3.xx  
Tapr Eprom fitted TNCs  
Tncs fitted with TF or WA8DED  
MFJ TNC 2 types 1270c etc

This Program is by PA3FUA and is 8004 bytes .. I can Email attach it to this List if there is enough interest ..

> "(SV2AGW) Rossopoulos George" <sv2agw@the.forthnet.gr>  
> [NETSIG:3204] RE; kiss tncs  
  
> A month ago i asked Kantronics,MFJ and Paccom (AEA ia out of business) to  
> tell me how to enter kiss mode with their tncs, because i need the info for  
> my Programs (AGW Packet).  
>  
> Only Kantronics responds and i include their.

73 Phillip ZL2TZE --  
Phillip Conza  
AX25                      ZL2TZE @ ZL2TZE.#73.NZL.OC  
E-Mail private            phil@zl2tze.mlb.planet.gen.nz

---

## 11. Re: [NETSIG:3203] Re: Kiss Commands

From: Mike Curtis <wd6ehr@kaiwan.com>  
Date: Sun, 25 May 1997 04:15:48 -0700 (PDT)  
To: netsig@tapr.org  
Message-ID: <Pine.SUN.3.95.970525041310.14047D-100000@kaiwan009.kaiwan.com>  
Rendered body type: text/plain

On Fri, 23 May 1997, Tom Saluti (N1KIO) wrote:

> For a KPC-3 the commands are as follows.  
>  
> INT KISS ON

For my KAM, the command is "int kiss", with no "on" appended. Also, RESET must be spelled out in full.

-- mike

---

## 12. Re: Kiss Commands

From: "Krassi Kossev" <lz4kk@ait.ru.acad.bg>  
Date: Sun, 25 May 1997 21:39:23 +0200  
To: netsig@tapr.org  
Message-ID: <199705251838.VAA06893@sting.ait.ru.acad.bg>  
Rendered body type: text/plain

Hi John,

If you intend to use the TNC in KISS mode permanently, it is best choice to replace the old EPROM with a KISS only EPROM. And if you are using BPQ, xNOS or another software allowing BPQ POLLED KISS TNCs to be attached, these BPQ KISS EPROMs are best choice. You can connect several TNCs on a single COM port, they are working very reliable and I can't see any decrease of speed performance of the system (at least at 1200 bps from HDLC side, 9600 RS232).

Sometime it happens because of power supply glitches that TNC fall out from KISS mode, and even a power reset does not help (TNC2 clones). With JKISS or BPQKISS EPROMS this have not happened here, running more than year this way. I am sysoping both my systems remotely only, this have saved me a lot of troubles HI..

73 de Krassi, LZ4KK @ LZ2KIM.BGR.EU

---

### 13. Re: [NETSIG:3207] Re: Kiss Commands

From: Sid Ashen-Brenner <sashen@midusa.net>  
Date: Sun, 25 May 1997 15:10:34 -0500  
To: netsig@tapr.org  
Message-ID: <3.0.32.19970525151026.006ebd5c@midusa.net>  
Rendered body type: text/plain

Having problems with your TNC's "falling out" of KISS mode?  
Easy solution.... it's time to replace the TNC's Battery!  
When WAS the last time you changed your TNC's Battery??  
I replace mine every two years and don't have any problems!  
73 de Sid

Sid Ashen-Brenner Salina, Kansas  
Internet : sashen@midusa.net  
AX-25 : n0obm @ n0obm.#ncks.ks.usa.noam

---

### 14. Re: [NETSIG:3208] Re: Kiss Commands

From: "Karl F. Larsen" <k5di@acca.nmsu.edu>  
Date: Sun, 25 May 1997 16:27:36 -0600 (MDT)  
To: netsig@tapr.org  
Message-ID: <199705252227.QAA07441@acca.nmsu.edu>  
Rendered body type: text/plain

At 03:19 PM 5/25/97 -0500, you wrote:  
>  
>Having problems with your TNC's "falling out" of KISS mode?  
>Easy solution.... it's time to replace the TNC's Battery!  
>When WAS the last time you changed your TNC's Battery??  
>I replace mine every two years and don't have any problems!  
>73 de Sid  
>  
Hi Sid, and if your TNC is a TNC-2 or any clone you should get a  
kiss only e-prom from TAPR or a friend. I use only the kiss software written  
by John Wise G8BPQ since it's best. It allows you to have more than one TNC  
on each serial port of your computer.

Be glad to make an send out a kiss e-prom for cost.

>  
>Sid Ashen-Brenner Salina, Kansas  
>Internet : sashen@midusa.net  
>AX-25 : n0obm @ n0obm.#ncks.ks.usa.noam  
>  
73, de Karl aka k5di

Karl F. Larsen Box 74, Mesilla Park, NM 88047 (505) 524-3303  
k5di@k5di.cruces.nm.usa.noam k5di@acca.nmsu.edu

---

### 15. Re: [NETSIG:3209] Re: Kiss Commands

From: frank paxton iii <paxton@kcnet.com>  
Date: Sun, 25 May 1997 19:33:53 -0500  
To: netsig@tapr.org  
Message-ID: <3388DA71.4D6A@kcnet.com>  
Rendered body type: text/plain

> Hi Sid, and if your TNC is a TNC-2 or any clone you should get a  
> kiss only e-prom from TAPR or a friend. I use only the kiss software written  
> by John Wise G8BPQ since it's best. It allows you to have more than one TNC  
> on each serial port of your computer.  
>  
> Be glad to make an send out a kiss e-prom for cost.  
>  
> >  
> >Sid Ashen-Brenner Salina, Kansas  
> >Internet : sashen@midusa.net  
> >AX-25 : n0obm @ n0obm.#ncks.ks.usa.noam  
> >  
> 73, de Karl aka k5di  
>  
> Karl F. Larsen Box 74, Mesilla Park, NM 88047 (505) 524-3303

> k5di@k5di.cruces.nm.usa.noam k5di@acca.nmsu.edu

what's the diff between this and a TAPR kiss eprom ?

.....  
frank paxton  
paxton@kcnet.com  
(816)361-6194  
.....

---

## 16. Re: [NETSIG:3210] Re: Kiss Commands

From: "Karl F. Larsen" <k5di@acca.nmsu.edu>  
Date: Sun, 25 May 1997 21:06:58 -0600 (MDT)  
To: netsig@tapr.org  
Message-ID: <199705260306.VAA09948@acca.nmsu.edu>  
Rendered body type: text/plain

I forget what TAPR provides. It might be the same. I just do not know.

At 07:42 PM 5/25/97 -0500, you wrote:

>> Hi Sid, and if your TNC is a TNC-2 or any clone you should get a  
>> kiss only e-prom from TAPR or a friend. I use only the kiss software written  
>> by John Wise G8BPQ since it's best. It allows you to have more than one TNC  
>> on each serial port of your computer.

>>  
>> Be glad to make an send out a kiss e-prom for cost.

>>  
>> >  
>> >Sid Ashen-Brenner Salina, Kansas  
>> >Internet : sashen@midusa.net  
>> >AX-25 : n0obm @ n0obm.#ncks.ks.usa.noam  
>> >  
>> 73, de Karl aka k5di

>>  
>> Karl F. Larsen Box 74, Mesilla Park, NM 88047 (505) 524-3303  
>> k5di@k5di.cruces.nm.usa.noam k5di@acca.nmsu.edu  
>

>what's the diff between this and a TAPR kiss eprom ?

>.....  
>frank paxton  
>paxton@kcnet.com  
>(816)361-6194  
>.....  
>  
>73, de Karl aka k5di

Karl F. Larsen Box 74, Mesilla Park, NM 88047 (505) 524-3303  
k5di@k5di.cruces.nm.usa.noam k5di@acca.nmsu.edu

---

## 17. Is SS The Solution For High Speed Packet Networks?

From: Marty Albert <marty@trucom.com>  
Date: Sun, 25 May 1997 22:18:35 -0500  
To: bbssig@tapr.org, netsig@tapr.org, ss@tapr.org  
Message-ID: <1.5.4.32.19970526031835.006744b0@mail.trucom.com>  
Rendered body type: text/plain

Hello, Folks:

I have a feeling that I may catch a lot of flames for this one from the SS crowd, but...

I've done a lot of reading and testing the past year or so and was wondering if I am the only person who does not see Spread Spectrum (SS hereafter) to be the answer for high speed, high bandwidth packet networks.

Now, don't get me wrong... I fully support the continued experiments with SS that may lead to something valuable, but I am talking about real world, here and now applications.

After doing a lot of research, it has become clear to me that SS suffers from several major problems for practical use in a large network...

(1) There are no fully documented systems using SS that are cost effective that I have found.

(2) Most of the SS systems I have looked at require a lot of tweaking to get them to work, often meaning a near re-engineering of the system for each link.



(3) None of the real experts doing SS development (I am not one of them!) seem to be willing to develop a simple, reproducible SS system that can be used right now.

Based on what I have actually seen of packet networks and on what I have read other people say about their local networks, I think that most high speed packet networks fall into one of the following classes:

(A) There ain't one.

(B) The network is broken to some extent or another, often due to lack of repairs and/or updates.

(C) The network is 10 or more years out of date, still relying on old, slow links (sometimes 9600 bps, often 1200 bps).

So, what we really need is a "Plug And Play" network solution. SS does not, at this time, offer such ease of set up and operation. It may at some point in the future, but not now.

There are several options out there now, but one of the best that I have seen in terms of documentation and the ability to be reproduced is the system being used in Slovenia. (see <http://lois.kud-fp.si/hamradio/packet.html> for more information)

The Slovenian network uses high speed radio modems to allow speeds up to 1.2 Mbps. All of the schematics, PCB layouts, etc. are fully available. The fine folks there that are involved with the project are also very willing to help and answer questions.

It is worth noting that the Slovenian system uses simple techniques that are both time tested and understandable by, I suspect, most Hams.

Again, don't get the wrong idea here... I am not saying that the Slovenian system is better than SS, just that it is much easier to impliment and it is available now. A pair of 1.2 Mbps Slovenian style radio modems can be built in less than a week for less than \$100.00. My experiements with SS took 6 weeks and nearly \$200.00 to get working and they were still not right and only 56 Kbps.

I would encourage those doing SS development to continue to do so, but to perhaps shift the focus to real world applications. We need clear, reproducible designs that are simple to build, install, set up and operate.

And, perhaps even more important in the packet world where \$\$\$ are hard to come by, we also need something that is inexpensive.

So, in closing, those interested in packet networking should take a close look at the Slovenian system (URL above) before jumping on the SS bandwagon.

It just seems that I am the only person out there who is not in love with SS as the solution for high speed packet.

Take Care & 73

Marty Albert - [marty@trucom.com](mailto:marty@trucom.com)  
Amateur Radio: KC6UFM@KC6UFM.#SEMO.MO.USA.NOAM

\*\*\*\*\*  
Interested in Amateur Radio?  
<http://www.trucom.com/ppages/marty>  
\*\*\*\*\*  
HAMPS Coordinator  
<http://www.geocities.com/CapeCanaveral/Lab/7067>  
\*\*\*\*\*

---

## 18. Re: [NETSIG:3210] Re: Kiss Commands

From: Sid Ashen-Brenner <[sashen@midusa.net](mailto:sashen@midusa.net)>  
Date: Sun, 25 May 1997 22:29:12 -0500  
To: [netsig@tapr.org](mailto:netsig@tapr.org)  
Message-ID: <3.0.32.19970525222818.006ee814@midusa.net>  
Rendered body type: text/plain

At 07:42 PM 5/25/97 -0500, you wrote:

>> Hi Sid, and if your TNC is a TNC-2 or any clone you should get a  
>> kiss only e-prom from TAPR or a friend. I use only the kiss software  
written  
>> by John Wise G8BPQ since it's best. It allows you to have more than one TNC

```
>> on each serial port of your computer.
>>
>>      Be glad to make an send out a kiss e-prom for cost.
>>
>> >
>> >
>> 73, de Karl aka k5di
>>
>>      Karl F. Larsen Box 74, Mesilla Park, NM 88047 (505) 524-3303
>>      k5di@k5di.cruces.nm.usa.noam k5di@acca.nmsu.edu
>
>what's the diff between this and a TAPR kiss eprom ?
```

The ability to runn "Polled" KISS .... more than one TNC on a single Serial Port.

73 de Sid

Sid Ashen-Brenner Salina, Kansas  
 Internet : sashen@midusa.net  
 AX-25 : n0obm @ n0obm.#ncks.ks.usa.noam

---

## 19. Re: [NETSIG:3211] Re: Kiss Commands

From: Bob Nielsen <nielsen@primenet.com>  
 Date: Mon, 26 May 1997 09:59:11 -0700 (MST)  
 To: netsig@tapr.org  
 Message-ID: <Pine.LNX.3.96.970526095426.8742B-100000@nielsen>  
 Rendered body type: text/plain

It's not the same. I don't remember the exact differences, but John's JKISS had a few improvements. He also has one optimized for the PacComm TNC-220 as well as the multiple port version. All the images are available in the 4.08a distribution on ftp.ucsd.edu and elsewhere.

On Sun, 25 May 1997, Karl F. Larsen wrote:

```
> I forget what TAPR provides. It might be the same. I just do not know.
>
>
>
> At 07:42 PM 5/25/97 -0500, you wrote:
> >>      Hi Sid, and if your TNC is a TNC-2 or any clone you should get a
> >> kiss only e-prom from TAPR or a friend. I use only the kiss software written
> >> by John Wise G8BPQ since it's best. It allows you to have more than one TNC
> >> on each serial port of your computer.
```

Bob

```
-----
Bob Nielsen      Internet: nielsen@primenet.com
Tucson, AZ      AMPRnet: w6swe@w6swe.ampr.org
                  AX.25: w6swe@wb7t1s.az.usa.noam
                  http://www.primenet.com/~nielsen
```

---

## 20. Re: Kiss Commands

From: "Krassi Koshev" <lz4kk@ait.ru.acad.bg>  
 Date: Mon, 26 May 1997 20:33:30 +0200  
 To: netsig@tapr.org  
 Message-ID: <199705261732.UAA09683@sting.ait.ru.acad.bg>  
 Rendered body type: text/plain

```
>
> Having problems with your TNC's "falling out" of KISS mode?
> Easy solution.... it's time to replace the TNC's Battery!
> When WAS the last time you changed your TNC's Battery??
> I replace mine every two years and don't have any problems!
```

> 73 de Sid

```
>
>
> Sid Ashen-Brenner Salina, Kansas
> Internet : sashen@midusa.net
> AX-25 : n0obm @ n0obm.#ncks.ks.usa.noam
>
>
```

Hi Sid,

The problem is not with battery.. I mean cases when after a power failure the RAM becomes "garbaged" - some bits or bytes are incidentally written with wrong values. After power reset, it seems the

internal checksums are incorrectly calculated and sometime strange things happen.. The "standard" TAPR firmware switched in KISS mode does not work, can not be reseted back in terminal mode (by software reset), until the battery is removed and the RAM chip discharged.

Another example - TheNet+ firmware (have used versions from 2.08 to 2.12) sometime (2-3 times per year) also locks up after similar power glitches failures - again RAM is corrupted, but the software checksums are maybe not correctly calculated - and no \_hard\_ reset is performed after power on! The result is garbage parameters, even the callsign of the Node sometime has been "converted" to LZ\$%-2 (It seems the callsign is copied from ROM into RAM during a hard reset only and then the RAM image is used, or there is a mask used which has get corrupted.. or who knows..) The result is that the Node is not operative, can not be reset remotely by simply switching off and on :- ( This is not an unique case here, I have had reports from other Node sysops for similiar problems. The solution is - removing the battery, after switching off, waiting several minutes for fully RAM discharge and again switching the TNC on - the firmware performs COLD reset with all parameters copied from the ROM image.

Maybe this happens here because of the very often power supply failures (the same power supply line is used to drive 200kW transport lift, lights often hit around, etc..). I have changed several TNCs, all different TAPR clones, the same effect.. Since this year I am using X1J firmware attached in KISS mode to BPQ switch on one COM port and two BPQ POLLED KISS TNCs on another, (batteries removed). At the X1J TNC I have replaced the old 61256 with a DALLAS DS1230Y/AB 32K Nonvolatile RAM - it has lithium battery inside, and internal circuits which constantly monitors the power supply and automatically write protect the RAM when Vcc decrease.. I haven't had any problems since then.. hope for long HI...

73 de Krassi, LZ4KK @ LZ2KIM.BGR.EU  
lz4kk@ait.ru.acad.bg

---

## 21. Re: [NETSIG:3215] Re: Kiss Commands

From: Fredrik Bonde <e89\_bond@etek.chalmers.se>  
Date: Mon, 26 May 1997 21:33:54 +0200 (MET DST)  
To: netsig@tapr.org  
Message-ID: <Pine.OSF.3.96.970526212850.13232A-100000@hortensia>  
Rendered body type: text/plain

Hi,

On Mon, 26 May 1997, Krassi Kossev wrote:

> Another example - TheNet+ firmware (have used versions from 2.08 to 2.12)  
> sometime (2-3 times per year) also locks up after similar power  
> glitches failures

<snip>

> I have changed  
> several TNCs, all different TAPR clones, the same effect..

We have had this problem with the Tiny-2, but the TNC2C (danish) seems to have a much better hardware reset circuit, and hasn't shown any problem like this (so far ;-).

73 de Fredrik, SM6UBC

- - - - -

|                                           |                           |
|-------------------------------------------|---------------------------|
| Fredrik Bonde                             | e89_bond@etek.chalmers.se |
| Gibraltag 82-149                          | SM6UBC @ SK6YW.O.SWE.EU   |
| 412 79 Göteborg                           |                           |
| tel: +46 - (0)31 - 20 88 76 el. 772 39 79 |                           |

---

## 22. Re: [NETSIG:3215] Re: Kiss Commands

From: Phillip Conza <phil@zl2tze.mlb.planet.gen.nz>  
Date: Tue, 27 May 1997 08:27:52 -1200  
To: netsig@tapr.org  
Message-ID: <338b3a14.zl2tze@zl2tze.mlb.planet.gen.nz>  
Rendered body type: text/plain

Hi Guys,  
 I have 4 TNC 2 Type TNCs all with standard Eproms all in daliy service ..

These are 2 DPKs ( DRSI) 1 Paccom Tiny 2 and 1 MFJ 1270c these are connected to the BBS here and have been used for 6 plus years.

I have never had any problems with the STANDARD KISS Eprom supplied off the self.. I don't use the standard method of placing these in KISS Mode I use the small Util program by PA3FUA this does 6 TNC types and also Un installs as well..

I did have problems at the begining and this was because I was trying to run the TNCs on a 3 wire cable . I moved to a full wire cable and todote not 1 TNC has dropped out of KISS mode..

> Hi Sid,

I have not had the problems listed below and I don't have to remove the battery to RESET any of my TNCs .. SETKISS does it all..

> The "standard" TAPR firmware switched in KISS mode  
 > does not work, can not be reseted back in terminal mode (by software  
 > reset), until the battery is removed and the RAM chip discharged.  
 >  
 > 73 de Krassi, LZ4KK @ LZ2KIM.BGR.EU  
 > lz4kk@ait.ru.acad.bg  
 >

73 Phillip ZL2TZE  
 --  
 Phillip Conza  
 AX25 ZL2TZE @ ZL2TZE.#73.NZL.OC  
 E-Mail private phil@zl2tze.mlb.planet.gen.nz

## 23. Re: [NETSIG:3215] Re: Kiss Commands

From: Sid Ashen-Brenner <sashen@midusa.net>  
 Date: Mon, 26 May 1997 17:04:23 -0500  
 To: netsig@tapr.org  
 Message-ID: <3.0.32.19970526170331.006ee7d0@midusa.net>  
 Rendered body type: text/plain

At 12:51 PM 5/26/97 -0500, you wrote:  
 >>  
 >> Having problems with your TNC's "falling out" of KISS mode?  
 >> Easy solution.... it's time to replace the TNC's Battery!  
 >> When WAS the last time you changed your TNC's Battery??  
 >> I replace mine every two years and don't have any problems!  
 >> 73 de Sid

The above was intended as a "generic" resspense. I have seen too many complain (both locally and world wide) about loosing the parameters that they have permed into their TNC's. Generally, the folks that are making the complaint have never changed the battery in their TNC... and wonder why things are not working quite "right". I offer the above as a First Step, and in many cases it has been the answer to the problem.

>The problem is not with battery.. I mean cases when after a power  
 >failure the RAM becomes "garbaged" - some bits or bytes are  
 >incidentally written with wrong values. After power reset, it seems the  
 >internal checksums are incorrectly calculated and sometime strange  
 >things happen.. The "standard" TAPR firmware switched in KISS mode  
 >does not work, can not be reseted back in terminal mode (by software  
 >reset), until the battery is removed and the RAM chip discharged.  
 >  
 >Another example - TheNet+ firmware (have used versions from 2.08 to 2.12)  
 >sometime (2-3 times per year) also locks up after similar power  
 >glitches failures - again RAM is corrupted, but the software  
 >checksums are maybe not correctly calculated - and no \_hard\_ reset is  
 >performed after power on! The result is garbage parameters, even  
 >the callsign of the Node sometime has been "converted" to LZ\$%-2 (It  
 >seems the callsign is copied from ROM into RAM during a hard reset  
 >only and then the RAM image is used, or there is a mask used which  
 >has get corrupted.. or who knows..) The result is that the Node is  
 >not operative, can not be reset remotely by simply switching off and  
 >on :-( This is not a unique case here, I have had reports from  
 >other Node sysops for similiar problems. The solution is - removing

>the battery, after switching off, waiting several minutes for fully  
>RAM discharge and again switching the TNC on - the firmware performs  
>COLD reset with all parameters copied from the ROM image.

This sounds like the result of using a plug-in type power supply, rather than the same power supply that is running the radio(s)? Or some rather "dirty" AC power at startup.

I have found it far less problematic to use the same power supply for both the radio and the TNC (as well as any other 12 volt appliances) at any node sites ... especially those that are in locations that are hard to get to! The larger power supplies seem to handle "dirty" power much better because of the size of the transformer.

>Maybe this happens here because of the very often power supply  
>failures (the same power supply line is used to drive 200kW  
>transport lift, lights often hit around, etc..). I have changed  
>several TNCs, all different TAPR clones, the same effect..

Are "they" also having problems with their equipment? Sounds like the wiring in general could be a bit undersized. At 200Kw, I certainly hope they are running 3 phase at something higher than 220 volts.

>Since this year I am using X1J firmware attached in KISS mode to BPQ  
>switch on one COM port and two BPQ POLLED KISS TNCs on another,  
>(batteries removed).  
>At the X1J TNC I have replaced the old 61256 with a DALLAS DS1230Y/AB  
>32K Nonvolatile RAM - it has lithium battery inside, and internal  
>circuits which constantly monitors the power supply and automatically  
>write protect the RAM when Vcc decrease.. I haven't had any problems  
>since then.. hope for long HI...

Have run both The/Net (2.08-2.11) and X1J in the local area here, and not really had problems with either (aside from my setting some parameter or other wrong.. but that was MY fault, not the software). I am no longer Sysoping the local node here that is now running 1200/9600 on a KPC-9612, as it was provided by someone else for a change... I'll let them have the headaches for a while!

Good luck with your project.  
73 de Sid

Sid Ashen-Brenner Salina, Kansas  
Internet : sashen@midusa.net  
AX-25 : n0obm @ n0obm.#ncks.ks.usa.noam

---

## 24. Re: [NETSIG:3208] Re: Kiss Commands

From: "Rod Fowler (afa1nc)" <k2adj@mosquito.com>  
Date: Tue, 27 May 1997 00:55:21 -0400  
To: netsig@tapr.org  
Message-ID: <2.2.16.19970527045521.1c7787e2@mosquito.com>  
Rendered body type: text/plain

At 03:19 PM 5/25/97 -0500, you wrote:  
>  
>Having problems with your TNC's "falling out" of KISS mode?

You are probably using an MFJ TNC as they are famous for that..  
You can program it to STAY in the KISS mode by sending to the  
TNC several commands..  
ALT 192 ALT 253 ALT 192  
Now, I could be rong, that ALT 253 could be 251 but not sure but  
worth a try..

That is above, holding down the ALT key and typeing on the keypad  
the numbers 192...etc, release the ALT key and hit the ATL key again  
for the next series of numbers..

73 de Rod

---

## 25. Re: [NETSIG:3203] Re: Kiss Commands

From: "John A. Hansen" <hansen@ait.fredonia.edu>  
Date: Tue, 27 May 1997 12:03:43 -0400  
To: netsig@tapr.org  
Message-ID: <338B05DF.29F0@ait.fredonia.edu>  
Rendered body type: text/plain

Tom Saluti (N1KIO) wrote:  
>  
> For a KPC-3 the commands are as follows.  
>  
> INT KISS ON  
> then  
> RESET  
> either shut of the power or issue the command.  
>  
> 73 from Tom

Thanks for the info Tom!

73, John  
WA0PTV

---

## 26. Re: [NETSIG:3219] Re: Kiss Commands

From: Sid Ashen-Brenner <sashen@midusa.net>  
Date: Tue, 27 May 1997 16:50:09 -0500  
To: netsig@tapr.org  
Message-ID: <3.0.32.19970527164920.0070d1dc@midusa.net>  
Rendered body type: text/plain

At 11:57 PM 5/26/97 -0500, you wrote:  
>>  
>>Having problems with your TNC's "falling out" of KISS mode?  
>  
>You are probably using an MFJ TNC as they are famous for that..  
>You can program it to STAY in the KISS mode by sending to the  
>TNC several commands..  
>ALT 192 ALT 253 ALT 192  
>Now, I could be wrong, that ALT 253 could be 251 but not sure but  
>worth a try..

[Alt] 192 [Alt] 255 [Alt] 192 takes a MFJ TNC Out of KISS mode. Also many other brands of TNC's.

I personally do not have problems with my TNC's falling out of KISS, or loosing any data, I just offered the "Change the Battery" routine as something to be considered as "worthwhile" if someone had NOT changed their TNC's Battery in the past several years.

I'm going to be quiet now.

Sid

Sid Ashen-Brenner Salina, Kansas  
Internet : sashen@midusa.net  
AX-25 : n0obm @ n0obm.#ncks.ks.usa.noam

---

## 27. Re: [NETSIG:3221] Re: Kiss Commands

From: "Rod Fowler (afa1nc)" <k2adj@mosquito.com>  
Date: Wed, 28 May 1997 00:17:12 -0400  
To: netsig@tapr.org  
Message-ID: <2.2.16.19970528041712.11a7f4f0@mosquito.com>  
Rendered body type: text/plain

Re: TNC's jumping out of KISS mode

This is mainly with reference to the MFJ-1278 which had this problem or it showed up more with this model than any of the others but they did it also.. The cause of the problem according to MFJ is that when the TNC hears nothing for some time (how long is ??) the TNC will revert back to normal operation..

A failed battery plus a power line dip on other TNCs could definitely cause the same indication as you say..

73 de Rod

---

## 28. Re: [NETSIG:3222] Re: Kiss Commands

From: Bob Nielsen <nielsen@primenet.com>  
Date: Wed, 28 May 1997 08:57:55 -0700 (MST)  
To: netsig@tapr.org  
Message-ID: <Pine.LNX.3.96.970528085337.388A-100000@nielsen>  
Rendered body type: text/plain

-----  
 Bob Nielsen                    Internet: nielsen@primenet.com  
 Tucson, AZ                    AMPRnet: w6swe@w6swe.ampr.org  
                               AX.25: w6swe@wb7tts.az.usa.noam  
                               http://www.primenet.com/~nielsen

several  
TNC's at home, in fact I think that there is one that has been running  
continuously  
now for over a year without a power down or a reset --- It runs behind a  
battery  
along with some other gear so it does not see power downs or NPWI's --  
Non  
Programmed Wallsocket Interruptions--- i.e. plug pulled from wallsocket  
for  
some reason.

I also have been running several variants on the BPQ kiss and none of  
them appear  
to reset or die....

--  
Chuck Hast  
wchast@utilpart.com

kp4djt

---

### 31. Re Kiss Commands (Hints and Tips)

From: "(SV2AGW) Rossopoulos George" <sv2agw@the.forthnet.gr>  
Date: Thu, 29 May 1997 16:28:50 +0300  
To: <netsig@tapr.org>  
Message-ID: <199705291403.RAA08741@nefeli.forthnet.gr>  
Rendered body type: text/plain

I am working with kiss for about 5 years now programming various tncs.  
I noticed the follow.  
With the same tnc, Kiss mode works better if i use the kiss from The  
firmware Eprom. The Tapr eprom  
seems to be unable to send always correct data to Computer.  
When i was trying to improve my serial port algorithm for WIN95  
(synchronization objects etc) i noticed the follow. When i dont get the data  
from the tnc the tnc after a while does a soft reset returning to human  
mode. The wiring is with 5 cables(Rd,Td,Cts,Rts,Gnd). This happens with the  
Firmware Eprom. I dont try the TAPR because as i mentioned before doesnt  
work properly. Also when i use an extended kiss protocol (With checksum)  
everything works fine for ever!!!!.

Nowdays all the packet programs are automatic there is no need for battery.  
I suggest to remove the battery from your tnc unless it is from AEA and  
enters autobaud mode. Then be sure that your program sends all the  
necessary parameters.

Also i never tried the special BPQ kiss eproms because they need polling,  
something that is terrible for Win 95 programs the computer slows down from  
Pentium to 386!!

73's to All  
George Rossopoulos  
e-mail:sv2agw@the.forthet.gr  
packet:SV2AGW@SV2DXC.TSL.GRC.EU  
<http://www.forthnet.gr/sv2agw/>  
<http://www.intranet.gr/isefi/rossopou/rossopou.htm>

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# June 1997

Original source file: netsig.9706

Source: [http://ftp.tapr.org/tapr\\_history/SIG\\_Archives/netsig/mail\\_archive/netsig.9706](http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.9706)

## 1. General Network Ideas...

From: Marty Albert <marty@trucom.com>  
Date: Sun, 01 Jun 1997 22:18:41 -0500  
To: bbssig@tapr.org, netsig@tapr.org  
Message-ID: <1.5.4.32.19970602031841.00677554@mail.trucom.com>  
Rendered body type: text/plain

Let me bounce a few general concepts off of the readers here and see what sort of comments and/or suggestions that you may have...

First, the basic geography of the area is such that there is an area about 125 miles by 150 miles with a distance of about 35 miles between population centers. The terrain is low, rolling hills with the occasional "big hill". (I won't call them mountains!)

My initial impression is that what is needed to provide good packet coverage for the area would be for LAN/MAN structures in the population centers and having those tied together with a WAN structure. The question comes in as to how fast the two structures need to be in relation to each other.

I would envision various services, such as a BBS and, perhaps, a DX Cluster and Convers server, in each LAN so that users would not need to use the WAN to get to these services. The WAN would mostly serve to pass information between the LANs.

Obviously, the LAN would need to be as fast as possible (ideally) but most of the users would still be at 1200 bps for at least the near future. With work being done with SS and other systems, perhaps the users will be accessing at Mbps speeds in the not too distant future. Ideally, the WAN would be able to be designed and constructed to be able to deal with this in the future.

So, if we assume that most users will be using 1200 bps now, perhaps moving up to 9600 bps fairly soon, maybe even 56K not too far off, and Mbps speeds within a couple of years, how fast does the WAN need to be?

My gut feeling is that a 56K WAN would do the trick IF users were to stay in their LAN for BBS and other services.

Any comments?

Take Care & 73

Marty Albert - marty@trucom.com  
Amateur Radio: KC6UFM@KC6UFM.#SEMO.MO.USA.NOAM

\*\*\*\*\*  
Interested in Amateur Radio?  
<http://www.trucom.com/ppages/marty>  
\*\*\*\*\*  
HAMPS Coordinator  
<http://www.geocities.com/CapeCanaveral/Lab/7067>  
\*\*\*\*\*

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## 2. Packet Radio

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>  
Date: Wed, 4 Jun 1997 00:52:05 -0500  
To: "NETSIG list mailing" <netsig@tapr.org>,  
"BBS SIG list mailing" <bbssig@tapr.org>  
Cc: 105643.3160@CompuServe.COM  
Message-ID: <v03020904afbab2df4da7@208.134.134.40]>  
Rendered body type: text/plain

Hi gang.

Anyone in the Detroit area that could contact Mike ?

Cheers - Greg

>Date: Wed, 4 Jun 1997 00:39:42 -0400  
>From: Mmotor <105643.3160@CompuServe.COM>  
>Subject: Packet Radio

>To: "wd5ivd@tapr.org" <wd5ivd@tapr.org>  
>MIME-Version: 1.0  
>  
>Hello Greg,  
> My name is Mike KC8FXF, and I am looking for a demo of Packet in my  
>area of north eastern Detroit . If you can be of any assistance please mail  
>me back. Thank you, '73'  
> Mike KC8FXF  
>  
-----  
Greg Jones, WD5IVD  
Austin, Texas  
wd5ivd@tapr.org  
http://www.tapr.org/~wd5ivd  
-----

### 3. Re: [BBSSIG:4305] Re: Unsubscribed

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>  
Date: Wed, 4 Jun 1997 17:41:32 -0500  
To: bbssig@tapr.org  
Cc: cbrabham@texoma.net, "NETSIG list mailing"<netsig@tapr.org>  
Message-ID: <v0302091bafbb6f2494e9@[208.134.134.40]>  
Rendered body type: text/plain

Dear Charles.

You are under a misconception that the BBS SIG Chair, the TAPR Internet Mgmt Committee, and myself placed you on the .ignored list because of your views. Sorry, but you are incorrect. What got you removed from this list was the manner in which you made those comments. I could go back and dig through the records (they are all on-line), but after two years and many of your messages it came down to insults, four letter words comments, and other abrasive approaches that got you removed from this list. Everyone has a right to speak out, but after a long history of messages that were clearly outside the statement of this group of acceptable behavior you were the first to ever have been placed in the .ignored file.

The BBS SIG Charter as setup by Dave Wolf, W05H, states:  
The criteria for appropriate publication are simple: messages should 1) advance the discussion at hand, 2) not perpetuate one of our many Holy Wars (i.e., my OS is bigger than your OS, or "your protocol stinks because"), and 3) avoid personal attacks (FLAMES).

This is the primary reason you were removed from the list Charles. Even after many messages that asked for change over the past several years.

>I have recently been attributed with "shutting down" the tcp-group list,  
>though it is not clear how I was supposed to have done that. I certainly  
>disagreed with many of the attitudes I found there, but mere disagreement  
>can only stimulate a vital, ongoing discussion. Only stagnant, aimless  
>discussions and ideas break up easily when exposed to simple disagreement.

Charles, when I saw you posting over there...I thought why ? Why would you impose yourself into a group that you knew was not doing what you liked. Amateur radio is about having fun and enjoyment. The folks over on TCP-GROUP were doing what they liked to do in the hobby. You didn't see them over here on the BBS SIG (although I am sure we have people in both lists) or on some other lists talking about TCP related stuff and jamming their beliefs on others without really any interest in the operation of the group. You went over there to cause problems, pure and simple. You were looking for another place to be able to post to and see a reaction and use as grist in your mill. Is that all you have to do Charles ?

Charles, why are you not out helping Joe Borovetz, Bob Morgan, and others maintain or improve the TexNet Network in your area ? Why spend your time writing inflammatory messages on the Internet and Packet radio ? Feel free to use the node I built in Denton in 1987 and feel free to use the node installed in Sherman that was built by Tom McDermott and feel free to use the other RF networking happening in Texas that others built; however, you make a big deal about RF networking, but can you modify a radio ? Have you ever built a TexNet node or other node stack, have you ever built a RF network over several sites and maintained them ? Have you ever operated faster than a 1200 baud TNC out of the box ? Have you done anything more than operate a BBS all these years and complained about what others were doing that you couldn't ? The world is full of people dissatisfied with their lives, but that is no reason to take it out on others trying to enjoy what they like to do and help the community as a whole to promote it.

I don't mind folks being outspoken, but there are Netiquette Guidelines for the Internet. There are guidelines for this list. I would hope you would take the time and read them someday. Finally the group decided to enforce them, instead of just shutting down the list.

>This is why Hank W0RLI and myself are Censored from the TAPR BBSSIG list.  
>The clique of "Internet Forwarding" advocates who have taken that list over  
>and chased off the real Ham Radio BBS SYSOPs are terrified of any form of  
>disagreement.  
>Hank and I pointed out that as Packet Radio BBS SYSOPs we should of course  
>be using Radios, and these "hams" found that concept to be intolerable.

You and Hank were not removed from the BBS SIG because of your stand against Internet Forwarding or the use of landline facilities. The reason that you were both removed because of the manner in which both you and Hank would state your case. As someone suggested, the alternative was to just shutdown the list. Barry didn't want this to happen so he requested that the current position be supported by the TAPR Internet Mgmt Committee. It did. This was after some two+ years of messages to base it on.

>Hank wanted to know if "advancing the use of the telephone" was included in  
>(Tucson Amateur Packet Radio) TAPR's charter...  
>Greg Jones WD5IVD ( President of TAPR ) didn't like the tone of THAT  
>question, and immediately after, both Hank and I were Censored from the  
>TAPR BBSSIG list.  
>For my part, I hadn't made ANY postings to the TAPR BBSSIG for several days  
>at that point. I was Censored along with Hank, simply because it was known  
>that I disagree with Greg Jones in his insistence that as hams, we would  
>all be better off using the Telephone with TCP/IP, than we would with  
>Radios and anything \*other\* than TCP/IP.

This is pure nonsense Charles. You have a right to state your position, but you don't have a right to dominate and close down lists because you feel a certain way. These SIGs are about communications and information sharing, not about places to stand up and continue to shoot people down for what they are doing. Amateur radio is about inclusion not exclusion.

Charles, how could you ever read into anything I ever wrote that said we should abandon radio communications ? Everything I have been doing over the last five years is focused on RF issues for going faster. The work on the SS STA, the current rule making, the project management of two spread spectrum radio projects, and all the other things I am involved in. You really should read my last TAPR President's corner. I am sorry that this offends some deep set belief, but in order to get people doing more than just 1200 baud we have to step forward, but at the same time step back. Our most talented people are spending countless hours trying to maintain the RF networks you feel are so important to life on earth, but this means that many of them don't have time to work on new things. We need to let them work on these new things. Some people that could help are so turned off by your attitude and posting and other flammers they do their own thing at home and are very happy and never share their abilities outside their own local area.

What you are going to see and are seeing is a re-emphasis on LAN/MAN issues. Not the abandonment of radios ? The question is -- how do you connect these new LAN/MAN when they are first built. You sure are not going to use 1200 or 9600 baud networks. You have to use something to allow networking to happen until there is enough critical mass to see the growth of RF networking where it makes sense. If you believe that people are going to build new networks to replace ROSE, TexNet, and others with the current user support levels -- I think you are wrong. We must again grow the local infrastructure so that regional and local groups have the ability to do things. TPRS (Texas Packet Radio Society) like many regional groups has no cash flow to do anything major in the way of investment in new technology or networks, because the members have left for other things. 1200 or 9600 baud networking to access the BBS, Weather server, or chat with a friend, doesn't cut it for the members who left these regional groups over the last 5 years.

How is your approach going to stop the erosion of regional groups networking and the reduction in membership, because things are not changing.

>There is a rumour now which says Greg is crawfishing on this issue with a  
>will, trying to place blame of TAPR's censorship on some mysterious "group"..  
>Let's see..  
>Greg Jones is not only president of TAPR, but a member of TAPR's Board of  
>Directors as well.. Which "group" is it, I wonder, which has more authority  
>within TAPR than Greg Jones? No, there's no doubt as to "who" is currently  
>running ( and ruining ) Tucson Amateur Packet Radio.

Not at all. We have had a group for this since the first problems between you, Brian Lantz, and some others happened. At that time, the exec committee felt TAPR needed to establish a committee to deal with these issues. We did. That committee was requested several times to place you on the .ignored list and finally after about the 4th request over two years it agreed.

As to who runs TAPR. TAPR is directed by a board of directors. You can visit <http://www.tapr.org/tapr/html/info.html> and see who the board of directors are. The TAPR Board meets on-line through the year and has two meetings a year in person at Dayton and the TAPR annual meeting. The board sets goals and direction and the exec committee then makes these happen. The exec committee is made up of Pres, VP, Sec, Trea, and others that are required to make the day to day happenings of TAPR possible. As President, like many groups, I run the day to day operations. However, TAPR is a very consensus based organization -- volunteer organization don't work otherwise.

I have as much power in the organization as the Board of Directors allows me to have...no less, no more.

>Hank's question about TAPR's charter IS interesting, isn't it? If TAPR's >charter is to advance Amateur Packet Radio, how does Greg Jones justify >tying up TAPR's resources and reputation with his personal quest for >"Radioless Ham Radio", and 'Amateur Telephone", ect., in order to prop up >amateur TCP/IP?

I would request that you actually point to a project like this that TAPR is doing currently ? I don't think you will find one -- will you ?

Charles, I spend to much of my personal time doing this. To a large extent it is a lot of fun being President of TAPR -- I sure don't get compensated for it and I sure put in a lot of my own money in at times, but I get to work closely with people like Phil Karn, Dewayne Hendricks, Lyle Johnson, Tom McDermott, Tom Clark, and many, many others. These folks are doers. When they get a thought in their head they want to make it happen. TAPR is all about enabling people who want to do things. However, people like yourself make it very hard to justify the volunteer time I place in TAPR. Although I am sure that will pass in the next few hours after I post this reply. I'll get it out of my system until the next bunch of messages accusing me of something else evil I have done. After a while the squelch level just goes up enough to handle it.

This all comes with the job. If I have to take heat on projects or concepts so other doers can get it done without being accused of treason, then so be it. I will feel very good about myself when I leave TAPR for what it has accomplished and what path I help set for the organization in the next 10 years.

TAPR is a vital organization with over 2500 members. You can either be a part of the group and get active and have a voice by doing things, or you can sit on the sidelines criticizing and complaining about how people don't listen to you and you are ignored and how bad things are in general. The amateur radio rule is that those who do (code and build) decide what others are doing in the future. You have to be a part of a positive project focus, not a tearing down of others to get things done and accomplished. This is what TAPR is all about inclusion of people in the hobby, not exclusion. TAPR is stronger because he have HF, TCP/IP, RF, DSP, GPS, APRS, etc etc and other interests actively being pursued within the organization.

>Amateur TCP/IP has proven to be unable to even experiment with, much less >emulate the sort of long-haul amateur radio links which are vital to our >global ham radio digital network today. For this reason, amateur TCP/IP is >literally no good for amateur packet radio networking of any significant >scale. It is a failure as an amateur radio application, partly because the >high volume, high speed "connectivity" it requires cannot currently be >provided with radio links.

>This is why there is no global amateur TCP/IP digital radio network at all, >and it also the reason that amateur TCP/IP fanatics are alone in the >amateur radio community in promoting and seeking to legitimize "Radioless >Ham Radio" ,where they depend on telephone links to provide long-haul >communications, \*pretending\* that this is ham radio by referring to the >telephone link as "advanced amateur radio networking", "Internet >Forwarding", ect... It's a sick attempt to prop up amateur TCP/IP while >damaging mainstream packet radio, and directly contrary to the best >interests of the amateur radio community.

>Greg knows his ideas and actions cannot stand up to close examination, and  
>would be laughed down in a free, open debate. He is terrified now of seeing  
>these matters openly, publicly discussed, and with good reason. He knows he  
>is in the wrong.

Wrong again Charles. I am sure I posted on here several months ago that I would be glad to debate you on this in a public forum at Dayton HamVention, HamCom in Arlington or else where. I go about 20 hours a day with work, so it is impossible to debate you in the electronic forum. I would just get shouted down like so many others that try to write back to you on issues likes this. Talk to Dave Wolf, there might be an hour opening at HamCom in three days -- I would be glad to have some defined debate happen at that time on this issue. It would be much fun.

Charles, if I knew I was wrong, I would admit it. TAPR would probably be off doing something else. I believe that amateur packet radio has to move back to the experimental days and begin to build new RF LAN/MAN structures for packet radio operations. How is that different from what you want ? I believe that in this approach we can generate a new level of interest and thus have a chance to be in a position to take advantage of new OTH technology that is coming from the military that delivers fractional T1 on the HF bands. However, without a new LAN/MAN concepts then we can't generate the needed support for your long haul networks. I do disagree with you that what you see now as networking is what we will use in the future as long-haul networks.

Long haul networks to be successful and maintainable over a long period of time have to be short in the number of nodes that they cross. Again, this is the Tom McDermott paper I keep referring to printed several years ago. Did you ever read it ? Going from here (Texas) to Calif over 50 nodes never worked very well and the chance of a node failure was very high over time. If and when we can take advantage of new OTH technology or SS on HF or get packages on the SkyStation systems, or use AMSAT satellites or launch our own gateways, or any of a number of similar systems, then the implementation of long-haul networks using existing technology as implemented in the amateur packet radio community doesn't make a lot of sense.

I don't see you out doing Charles....just advocating that others should. Led by example, not by shouts of anger and rage!

>Hence the frightened, cowardly Censorship to be found at TAPR, in defense  
>of actions which are detrimental to the amateur radio digital community.  
>(Internet Forwarding)

Nope. See above. If you could conform to the tenets of this group and you could convince Barry that you could and he asked the committee to reinstate you -- I am sure you could be back on the list as an active member Charles.

>Now, take a look at these last few postings to tcp-group and judge for  
>yourself as to why the tcp-group list REALLY shut down.

Oh -- one sided for sure the selection of your material Charles. I will not bore the group with the various posts you made that were screams of rage, insults, and general tripe on the TCP-GROUP. Just like the messages you use to post on the BBS and NET SIG lists. As I said above, you went over there to look for trouble. Thus, a rather large group of amateur radio operators who like to play ham radio and combine that love with TCP/IP operations got subjected to your messages. Life is too short for this approach Charles. I am sure many left -- like they did on the BBS SIG when you would start a rant thread on the SIG.

If you want change Charles, you have to change things locally and regionally ? Can you ? Will you ? It is easy to write, it is a lot harder to devote time to learning and the creation of systems others can use.

>  
>----- First Quote: -----  
>  
>  
>  
>  
>-----  
>  
>I didn't shut that list down. It shut itself down, and rightly so.

This does prove my statement above. You went over there to intentionally cause problems. You had a group of amateur operators having fun -- you showed up and the only defense they had, other than placing you in the

.ignored file, was to turn the list off. This list chose the first in order to allow others to continue to communicate. TCP-GROUP chose the later, because they then don't have to put up with statements about censorship.

Anyway, the tenets of the list have been posted for a long time and the list managers just got tired of them being trampled over all these years. Welcome to the Internet.

>Thanks for taking time to look and think this over. I figure since Greg >Jones is "big enough" to attempt to stifle other people's differing >opinions, I'll be "big enough" to tell my side of the story whether Greg >Jones likes it or not.

So glad you did Charles.

>I don't "goose-step" in line with ANY cowardly censor. If Greg Jones thinks >censorship is so wonderful, I'm sure there are places he can go where it is >considered to be normal, acceptable behaviour... Or have all of those >little communist dictatorships dried up by now?

I don't think censorship is wonderful; however, protecting the rights of others to communicate about things without the fear of being insulted, yelled out, or abused -- especially to new comers to the BBS operations -- is very important to me. If you could have followed the guidelines set forth when you joined the list, I am sure you would still be allowed to comment on various things stated on the BBS SIG.

The issue is not about censorship, the issue is about the manner and method in which you approached the use of the communications channel you were allowed to use -- namely the BBS SIG e-mail list.

>No matter. I'm sure that if Greg looks long enough and low enough, he'll >find a place where his behaviour is considered to be perfectly acceptable, >and the general population there will accept Greg's idea of arguing an >issue ( undercut and censor those with opposing views ) as the way mature, >responsible and decent adults deal with opposing viewpoints.

Name calling will get you far in the world Charles. At least I don't see any four letter words in this message -- good use of the dictionary.

>In an earlier posting, I suggested that this list is made for Amateur Radio >BBS SYSOPs, not "Internet Forwarders" who's actions are destroying that >very same BBS forwarding network we are allegedly here to discuss and >promote. I invited them to take a hike.

Charles, the mission statement of the BBS SIG list is:  
The BBSSIG mailing list charter is to provide a forum for the exchange of information about packet radio bulletin board systems and the issues surrounding their operation. News, hints & kinks, case studies, and such are welcome parts that we hope will become an important resource for those participating in the forum.

If someone wants to broaden their knowledge about how to do Internet stuff, that is their right within the hobby to learn new things. If they asked this question on the list, you would start a holy war on the subject. This again is what got you removed from the list. Not playing well with others is the simplest analogy. Someone asking about Internet related forwarding has just as much right as someone asking about HF forwarding on the BBS SIG.

>Today I am suggesting that if Greg Jones wants to take a position of >protecting those who are actively working to destroy the amateur packet >radio BBS network, that he is quite welcome to "take a hike" as well. Those >actions denigrate TAPR, and Greg's office within TAPR.  
>Hams will never feel the same about the president of TAPR again, now that >Greg Jones has used his office to protect and promote the "Internet >Forwarders" who are currently vandalising the BBS network.

Who would these people be Charles ? Why is it always 'those people'. I never hear about a project or projects. It is always me, those, and them ?

Examples ?

>Greg has perverted this forum into becoming something directly contrary to >it's stated purpose. He has turned this list into a refuge for the very >people who are currently destroying the amateur packet radio BBS forwarding >net. He protects them at every turn.

Is it me ? or is it you Charles ? I stated the mission statement of the

group above. Where you breaking it or was TAPR breaking it by allowing you free rein to trample on people when you wanted to. The purpose if any of the TAPR lists is to facilitate communications, not to perpetuate holy wars on one subject. The USENET is the place to hold these types of discussions -- and I am sure some will debate that USENET is not the place either :-)

>Why?

>

>That's a good question! I'll ask the question Hank Oredson asked, once again...

>

>Where in TAPR's charter does it call for us to "advance and develop" the art of using the telephone? Isn't TAPR supposed to be an Amateur Radio organization?

TAPR charter states:

The purpose for which the corporation is formed is that set forth in its Articles of Incorporation as from time to time amended; namely, for scientific and educational purposes. In the pursuit of that purpose the corporation will perform scientific testing and research into development and improvement of technological systems for use in the amateur radio service, including, but not limited to, digital packet radio communications; research and testing of systems, hardware and software, for packet radio local area networks and computer network systems; and disseminating to the public information obtained as a result of such research and testing. The corporation is not formed for a pecuniary gain, and no part of the assets, income, or profit of the corporation is distributable to, or will inure to the benefit of its directors or officers except to the extent permitted under the Not-for-Profit Corporation Laws of the State of Arizona.

There is the charter. Now, the question again is -- where can you point to a project that TAPR is doing that is 'telephone based' or uses telephones? All projects currently being done are amateur radio focused.

Let's look at a few TAPR projects over the last 18 months.

1. We got published Tom McDermott's, N5EG, very good educational publication on designing wireless systems -- modems, error correction, and lots of other information required to design and build digital **\*\*radio\*\*** communications systems.
2. Mic-Encoder. Attaches to your **\*\*radio\*\*** and allows you to do APRS without all the extra equipment.
3. TAC-2. Totally Accurate Clock. Give 1-5ns timing accuracy using GPS **\*\*radio\*\*** technology. Allows the amateur radio community to have access to technology that costs \$10K and up for less than \$300. Add to that the upcoming TOC -- and we can deliver a very precision 10Mhz OSC for **\*\*radio\*\*** applications that require a high accuracy timing element. There are some very interesting outcome from this project that can happen.
4. METCON-2. Second generation remote telemetry and control (using **\*\*radios\*\*** and AX.25) for remote control and gathering weather and other data at sites and making it available over a network or else where.
5. Spread Spectrum Issues. TAPR got issued a STA by the FCC for research into Spread Spectrum communications (**\*\*radios\*\*** again -- hum interesting trend here ah?). There have only been two such STA's issued before the TAPR one and the TAPR one has the most people participating then either of the two before. TAPR has over 40 people involved with at least 4 or 5 different **\*\*radio\*\*** projects happening there covering 6meters, 2meters, 900Mhz, and 2.4G. At the last TAPR board meeting in Dayton the board funded one of these projects as a TAPR project for alpha units. Not just radios, but very fast radios that can find spectrum to operate over.
6. NADSD (North American Digital Systems Directory). TAPR took over the digital listing in the repeater directory that the ARRL was dropping. In less than two months we had a fully automated systems that allows groups to submit **\*radio\*** network nodes. Add to that the ability to map out all these nodes so you can see where things are in a region. Next year we should be able to implement a method to show linking between these **\*radio\*** based networks and allow people to see paths.

I could list at a lot more of what TAPR is doing, but I think these make my point.

Charles, how is it that TAPR is doing 'telephone' projects again ? I must have missed that someplace ?

How is advancing the amateur radio art a bad thing ?  
How is enabling amateur digital communicators the ability to experiment a bad thing ?  
How is having fun in the hobby a bad thing ?

What exactly is your issue ? Is it just that you dislike me ? Is it as simple as a personality conflict ? or is it really something about what TAPR is doing ?

>If not, TAPR, then please change your name, charter, and logo to reflect >that.

>

>If so, TAPR, then please change your "policy" and your "leadership" to >once again reflect your charter.

See the charter above. I don't know what you thought TAPR was about, but from your continued posting on the subject, you have a very short understanding about what TAPR is doing. TAPR is about enabling people to do things -- education, research and development, kits, writing, etc. It is not about exclusion or name calling.

>The membership were told they were supporting Amateur Packet Radio when >they paid their TAPR dues. - Not "Amateur Telephone". They most certainly >were not told their money would go to promoting the vandalism and >destruction of the Packet Radio BBS forwarding network, and to protecting >those who participate in that vandalism.  
>Greg Jones is digging a deep hole for himself, coming out of the closet as >a "LandLine Lid", and Censoring anyone who tries to speak up for Amateur >Radio. The other folks at TAPR need to think about whether they are ready >to jump down in that hole along with him...

If I have to burned at the stake for excepting other amateur radio operators of different view points, beliefs, and operating practices, then so be it. I don't believe it is a bad thing NOT to tell someone to leave or go away when they are doing something different. You obviously from your many postings do believe this Charles.

If someone shows up at TAPR with a willingness to learn, experiment, or support others doing these things -- then Welcome to TAPR!

It will be a cold day in hell when I tell someone they are not wanted for just having an interesting in doing something different. Everyone is encouraged to join and become a participant in working and getting things done. Not setting around talking about them.

Cheers - Greg Jones, WD5IVD  
President TAPR  
(and proud of it!)

<http://www.tapr.org>

---

#### 4. Re: [NETSIG:3229] Re: [BBSSIG:4305] Re: Unsubscribed

From: "Ron Curry" <recurry@insighttec.com>  
Date: Thu, 5 Jun 1997 20:26:26 -0700  
To: <netsig@tapr.org>  
Message-ID: <199706060208.TAA03248@yankee.insighttec.com>  
Rendered body type: text/plain

Greg,  
You honor him far too much. Guys like Charles are why I recently cancelled my subscription to TCP-GROUP after many years. Bravo to your committee approach of .ignore management.

Ron Curry  
recurry@insighttec.com  
recurry@inside.intel.com  
KE6WED  
----

From: Greg Jones, WD5IVD <wd5ivd@tapr.org>  
To: netsig@tapr.org  
Date: Wednesday, June 04, 1997 4:19 PM  
Subject: [NETSIG:3229] Re: [BBSSIG:4305] Re: Unsubscribed

>Dear Charles.



>

## 5. ignore, don't suffer

From: WBRADFORD@delphi.com  
Date: Fri, 06 Jun 1997 01:51:32 -0400 (EDT)  
To: netsig@tapr.org, bbssig@tapr.org  
Message-ID: <01IJQH4VT8028WY6MD@delphi.com>  
Rendered body type: text/plain

Greg: Suffer not the fool, you explain/apologize too much.

For your own sake, for the sake of TAPR and the TAPR lists: Don't waste your time putting up with folks who disrupt a good thing.

Your message regarding the .ignored file was an excellent reminder of the good TAPR does, thanks to some real hams who volunteer a lot of their personal time and energy to make it work. And you have certainly gone the extra mile on being tolerant on what is posted here. Fortunately for us packet hams, guys like you love to spend your time doing. Defining what we all will be using in the future. We need to support your efforts, including your use of the .ignored list whenever you see fit.

73 Bill K7EA Salt Lake City

>Date: Wed, 4 Jun 1997 17:41:32 -0500  
>From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>  
>To: bbssig@tapr.org  
>Cc: cbrabham@texoma.net, "NETSIG list mailing"<netsig@tapr.org>  
>Subject: Re: [BBSSIG:4305] Re: Unsubscribed  
>Message-ID: <v0302091bafbb6f2494e9@[208.134.134.40]>

>Dear Charles.

>You are under a misconception that the BBS SIG Chair, the TAPR Internet  
>Mgmt Committee, and myself placed you on the .ignored list because of your  
>views. Sorry, but you are incorrect. What got you removed from this list  
>was the manner in which you made those comments. I could go back and dig  
>through the records (they are all on-line), but after two years and many of  
>your messages it came down to insults, four letter words comments, and  
>other abrasive approaches that got you removed from this list. Everyone  
>has a right to speak out, but after a long history of messages that were  
>clearly outside the statement of this group of acceptable behavior you were  
>the first to ever have been placed in the .ignored file.

Trimmed some excellent text

## 6. Re: [NETSIG:3230] Re: [BBSSIG:4305] Re: Unsubscribed

From: Bob Nielsen <nielsen@primenet.com>  
Date: Thu, 5 Jun 1997 23:39:52 -0700 (MST)  
To: netsig@tapr.org  
Message-ID: <Pine.LNX.3.96.970605233351.286B-100000@nielsen.tus.primenet.com>  
Rendered body type: text/plain

On Fri, 6 Jun 1997, Ron Curry wrote:

> Greg,  
> You honor him far too much. Guys like Charles are why I recently cancelled  
> my subscription to TCP-GROUP after many years. Bravo to your committee  
> approach of .ignore management.

It looks like Brian killed the tcp-group list because of Charles' repetitious one-subject, completely off-topic rantings (tcp/ip must be bad because that's what the gateways use.)

I haven't seen anything from the gateways list recently, although I don't recall seeing any attacks from Charles on that one.

I see that Charles has migrated over to usenet where he seems to be in good company.

Bob

-----  
Bob Nielsen Internet: nielsen@primenet.com  
Tucson, AZ AMPRnet: w6swe@w6swe.ampr.org  
AX.25: w6swe@wb7tls.az.usa.noam  
http://www.primenet.com/~nielsen

---

## 7. Reply Comments Docket 97-12 on SS Issues

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>  
Date: Fri, 6 Jun 1997 02:26:53 -0500  
To: "TAPR-BB list mailing" <tapr-bb@tapr.org>,  
"Spread Spectrum" <ss@tapr.org>,  
"TAPR Spread Sprctrum" <ss-sta@tapr.org>,  
"NETSIG list mailing" <netsig@tapr.org>,  
"TAPR Spread Sprctrum" <ss-sta@tapr.org>  
Message-ID: <v03020933afbd6ab9f5ad@192.168.1.2>  
Rendered body type: text/plain

Reply comment deadline for FCC Docket 97-12 (In the Matter of Amendment of Amateur Service Rules to Provide For Greater Use of Spread Spectrum Communication Technologies) was yesterday June 5th.

TAPR has started posting reply comments on our Spread Spectrum web page: <http://www.tapr.org/ss> go to the link "Spread Spectrum Rule Changes (RM-8737 & Doc. 97-12)"

The following reply comments are currently available for reading:

Tucson Amateur Packet Radio Corp 6/5/97  
Lyle Johnson, WA7GXD 6/5/97  
Glen Elmore, N6GN 6/5/97  
Robert Buass, K6KGS 6/5/97  
John Ackermann, AG9V 6/5/97  
Steve Dimse, K4HG 6/5/97  
Tom McDermott, N5EG 6/5/97  
John R Bingham, W7WKR 6/5/97  
John Koster, W9DDD 6/5/97

We expect to have more posted over the coming month as others send us electronic copies and we get copies of other filings directly from the FCC.

If you filed a reply comment and would like to have it available on the web page, please drop me an e-mail message with the text of the reply comment.

Cheers - Greg Jones, WD5IVD

-----  
Tucson Amateur Packet Radio  
8987-309 E Tanque Verde Rd #337 \* Tucson, Az \* 85749-9399 \* 940-383-0000  
-----  
e-mail: TAPR@TAPR.ORG ftp: ftp.tapr.org web: <<http://www.tapr.org/>>  
-----

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## 8. Amateur Radio Networks: Are Amateurs Willing to Pay the Price ?

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>  
Date: Fri, 6 Jun 1997 04:29:54 -0500  
To: "NETSIG list mailing" <netsig@tapr.org>  
Message-ID: <v0302093dafbd88d009bb@192.168.1.2>  
Rendered body type: text/plain

I was posting a message back in response to something on USENET and thought I would share what I wrote last year in the TPRS (Texas Packet Radio Society) Q-Report newsletter.

TPRS at the time I was writing this was and is suffering a down turn in membership and network stagnation. The purpose was to get people thinking about the future and hopefully get them active in at least doing something. I might not be right, but at least in Charles' case my goal was fully realized. Just look at the energy he has expended over the issue. I just wish it was a little bit more constructive in nature though -- like being a part of the solution -- building, maintaining, or helping the current TAPR TexNet cause. There are too few people in the TPRS regional group that do a lot of work and another pair of active hands could be the difference in keeping links up and working between Texas and Oklahoma.

I hope the article posted below gets others to think about where we have been and the possible future. Future theory says that you can not predict the future. All you can do is prepare your mind with different concepts of reality, so that as things change you can adapt to the situation.

Also, all of my writing as President of TAPR can be found at:  
[http://www.tapr.org/tapr/html/presidents\\_corner.html](http://www.tapr.org/tapr/html/presidents_corner.html) or on the top level of <http://www.tapr.org>

If you want to see what I have been writing in TAPR then check out this page.

Also, please note I use the term 'wireline' not 'telephone'. Big difference. Much of the existing TexNet network, which Charles uses to forward many of his BBS messages to others sysops transits across some of these commercial wireline pairs that TPRS (TexNet) has been able to use over the years to tie areas of Texas together that we would never be able to build node into. TPRS has even designed it owns 4-pair wireline modems to help trouble shot remote sites that we can't get access to in order to set levels on connections -- ture in the spirit of experimentation and development. When building networks, the concept is communications and sometimes in order to provide the service to fellow hobbieist you have to take advantage of what presents itself to make it happen. Just ask Harry Ridenour, N0CCW, TexNet network manager for the last ten years.

I hope you take a second and read my thoughts below. Keep in mind that they are a year old, but I still feel that amateur packet radio digital communication users have to make a decision 'are they willing to invest in the future of the mode ?'

Cheers - Greg, WD5IVD

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Reprinted from TPRS Q-Report, August, 1996.

Amateur Radio Networks: Are Amateurs Willing to Pay the Price ?

Greg Jones, WD5IVD

(wd5ivd@tapr.org, <http://www.tapr.org/~wd5ivd>)

What is a 'good' amateur radio network ? Is it our current 1200 baud or 9600 baud systems ? Are amateurs willing to pay the price in money, time, and manpower to make our current networks into 'better' networks ?

In 1982, it was the ability to use a local digipeater to be able to connect to the local BBS and even to chat with someone locally at 1200 baud. In 1985, it was the ability to use 9600 baud networks to be able to connect to the same type of BBS or a friend located any where across the state. In 1990, it was the ability to have access to new types of services (i.e. NWS, Radar, DX Cluster, etc). However, during the entire 10+ years, the user access speeds never increased -- even when plug-n-play equipment was available.

Why ? The equipment and technology have been here. Are 'hams' just too cheap to do it ? Why should any amateur radio operator be surprised that numerous 'hams' are leaving amateur radio for the Internet. It does many of the things that they find fun in amateur radio and access is a lot better. There are no local disputes, no club politics; it works all the time. There is no one telling them they can't get access to Houston, because there is no RF path, etc. It just works. But how can hams spend \$240+ a year for Internet dial-up modem access and not spend the same amount for amateur networks that could easily have better access than they get from their dial-up Internet providers ?

Amateurs in Texas, Oklahoma, and Arkansas, as well as the rest of the US, will shortly be faced with a decision. Either spend the money, time, and energy to upgrade existing amateur networking or watch it crumble. The most valuable things in any of our networks is not the equipment or networking technology, but the site locations and the few people who maintain them. In the TexNet network, we have very valuable sites that could easily be used to build a new TexNet network on-top of the existing one. As for the networkers who work the sites, we have to design a system that does not require one of them driving 5 hours to fix a node. Eventually, we will burn them out with the current network we support. The technology is here now -- and we better do something with it, or we can forget the 10+ years of work and effort that has been put into the existing networks.

In years past, we had many discussions and meetings on where TexNet should be going. The problem always came down to 1) cost of higher-speed radios and 2) how to make a new network backwards compatible with the older system. The radio problem, with the help of TAPR and others, is about to fix itself. The second item really comes down now to jumping to a new network all together. We leave the existing TexNet network in place and build a new one on top of it using new technology. In this manner, the older users are still supported, but a newer, faster network can be put in place.

What do I mean by 'newer and faster' ? TexNet-2 should support the goal of

providing high-speed local loop access, with enough RF and wire networking to tie nodes and regions together to support these higher user speeds. No user should be more than 2 or 3 hops from a high-speed link to the next regional area or a system information server. We have to eliminate the need to transit the entire state to get one bit of information. Speed is everything, unfortunately, for the survival of our existing networks. Amateurs are leaving our current systems because they perceive Internet as a better service, even if we consider that our phone modems operate at around 1200 baud. If we do not go at least as fast as 38.4Kbps on the user access ports, why do anything? We might as well leave amateur radio and go to the Internet or Part 15 devices for communications. The answer is easy -- nothing is stopping us from implementing high-speed RF within Part 97, that can't be found at twice the price in the commercial communications area.

Some might say that I have just made a pact with the 'Dark Side of the Force' by saying we should use wirelines and the Internet to connect regions in Texas, Arkansas, and Oklahoma and the U.S. at high-speed. My answer is no, we don't turn off the existing TexNet backbone, but use it for what it is good for, that of providing long-haul RF paths when our primary high-speed routes die. Many might say that the commercial wirelines are unreliable; however, the commercial world is learning every time there is a disaster that takes their equipment off-line. Soon, many commercial systems will not be affected by earthquakes and other such natural disasters. But when they are, we will need RF systems like the TexNet backbone which exists today to provide information flow. However, if we lose membership within TPRS because the existing network does not support what members want to do -- then the RF network goes away completely. Better to do new approaches and methods now and be able to keep things operational both with new and old systems, than to have no systems at all in place. Basically, the types of information flow amateurs want to do today, can't be supported with the existing TexNet network. This does not mean that the usefulness of TexNet has gone away. If anything, by invigorating the digital community again with new networking, we can continue to support the slower speed TexNet for emergencies when e-mail and bulletins are the only things that need to be passed some distance away.

Nothing is stopping us from putting up a backbone that operates at 2 Mbps or user access systems that operate at 64,000bps (twice as fast as any 28.8Kbps dial up modem). Using Spread Spectrum technology that is currently employed under Part 15, which can be used under part 97 (soon), and new technology that TAPR and others are working on, the tools to be able to implement a new network that provides 'faster' access to amateurs is here.

The only thing stopping us is ourselves. Do amateurs in Texas, Oklahoma, and Arkansas want a network that they can access from home at 64K+ speeds in order to access the Internet, do digital video, or whatever you can think of doing at that speed? If you do -- it is time to spend the money and time to make it happen. However, if you want ISDN speed access from home over amateur radio, it is going to cost more than 1200 baud 2-meter packet TNCs. Maybe a cost of more than \$500+ per home unit. Will you spend that? Many have been spending that much to do 9600 plug-n-play. Many have been spending around a \$1000 to do DSY 56K technology. A \$500 price point is cheap, considering that an ISDN to Ethernet box (Ascend Pipeline 25) costs \$1000 for ISDN access at home, it costs you several hundred dollars to have installed and probably about \$80 a month for the central office connection and Internet access fees. \$500 - \$1000 for a user access radio is half the cost of installing ISDN at your home for the first year. I would think hams would find that a huge savings!

In addition, will you support your local network node for the \$1000 - \$2000 it will cost to put up a node that can service your new radio? Without the infrastructure to support your radio, you can't get access at the speeds you want.

Now, I keep saying 'we' above. This is a 'we' not 'me'. While several of the typical amateur operators you find running about doing things can help install new nodes and work system problems, without 'you' putting forth the energy and effort to at least state that you want to see change, then nothing will happen. 'You' have to take an interest, contact the local movers-and-shakers and say you want to see better networking. You then have to have someone in your area become the led on the technology. Find out information about what is happening and see how to get involved in what will happen next. Finally, you have to be willing to write a check to your local club or group to purchase the necessary equipment for the network node and then purchase equipment yourself.

Are you willing to pay the price for 'better' amateur networks that can perform much better than what you are probably paying for monthly?

If so, it is time to start making a difference.

-----  
Greg Jones, WD5IVD  
Austin, Texas  
wd5ivd@tapr.org  
http://www.tapr.org/~wd5ivd  
-----

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## 9. Opps

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>  
Date: Fri, 6 Jun 1997 04:33:08 -0500  
To: "NETSIG list mailing" <netsig@tapr.org>  
Message-ID: <v0302093fafbd89a13ad9@[192.168.1.2]>  
Rendered body type: text/plain

I see I typed in TAPR TexNet....instead of TPRS TexNet. Sorry about that all thos in TPRS.

Fingers are to use to typing TAPR real quick all the time.

Cheers - Greg

-----  
Greg Jones, WD5IVD  
Austin, Texas  
wd5ivd@tapr.org  
http://www.tapr.org/~wd5ivd  
-----

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## 10. Re: [NETSIG:3201] Kiss Commands

From: Ulf.Kumm@t-online.de (Ulf Kumm)  
Date: Fri, 06 Jun 1997 15:03:17 -0700  
To: netsig@tapr.org  
Message-ID: <33988925.3E70@t-online.de>  
Rendered body type: text/plain

John A. Hansen wrote:

>

> It has come to my attention that different models of TNC's seem  
> to have different commands to get them into and out of KISS mode.....

dr John,

There exists a "TNC3S" in Germany, which uses a MC68302 Processor for high speed 2-channel packet radio. It supports up to 1.2 MBaud AX.25 links, up to 200 logical channels, 115kBaud RS232 and 2 MByte CMOS RAM. The operation in general does not differ very much from TNC2 but there are some hints for operation with KISS:

Normally, if the Turbo-Firmware is started (Autostart), this TNC3 uses Hostmode (WA8DED-like) and KISS is started with <ESC> @K <RETURN>

When the Turbo-Firmware is NOT active (i.e. the TNC3-operating-System prompts r:>), you may run the KISS application program by just entering RSKISS <RETURN>.

Note: As the TNC3S has 2 instead of just one modem ports, the port may be selected by the upper nibble of the command byte of every KISS packet. (normally 0 but 1 for Port 2) This feature is defined in the KISS definitions but the knowledge about these four bit has faded because TNC with more than 1 port are not common.

In Germany, we use the SMACK protocol (Stuttgarts Modified Amateur Checksum KISS) by DL5UE/DK5SG, which is fully compatible to Kiss. SMACK is available as "SMACK-only" EPROM (for TNC2) and built-in into the Nord<Link TF26... Hostmode Firmware.

If the TNC and the Host 'agree' to use SMACK, a checksum is added to every packet to ensure packet integrity. SMACK uses the MSB of the command byte for signalling, if the TNC/host is able to decode SMACK or not. So, only three bit (6,5,4) are left for selecting one of maximum 8 ports (however, the TNC3 has only two)

If your intention is to create TCP/IP software for packet, there are some more features available with TNC3: It supports SLIP and may be alternatively programmed by AT (Hayes) commands instead of WA8DED Hostmode or TAPR. To access a TCP/IP server via packet, there is no special software required. You need only a Winsock (Trumpet)

and a Browser (Netscape) to run HTTP, FTP, PING, TELNET etc.

If you are interested in more info about this TNC, have a look at the URL below. If you need Info about SMACK, just eMail.

Leaving KISS is always performed by sending the command byte \$FF.

73! Ulf, DK9SJ

--

Ulf Kumm, DK9SJ, D-70597 Stuttgart, Johannes-Kraemer-Str. 34  
eMail: Ulf.Kumm@t-online.de Phone: +49 711 7678-925 Fax: -924  
Internet home: <http://home.t-online.de/home/Ulf.Kumm/main.htm>

---

## 11. ?Increasing the speed of point-to-point link?

From: "Charles E. Gelm" <gelmc@erinet.com>  
Date: Fri, 06 Jun 1997 13:08:17 -0700  
To: netsig@tapr.org  
Message-ID: <33986E31.7ED6@erinet.com>  
Rendered body type: text/plain

I would like to try to increase the speed of a point-to-point link from 1200 baud to 9600 or more. What I want is:

1. TNC & Radio cost <= \$850 (i.e. <= 2x the cost of 1200 baud).

2. Test equipment <= multimeter & frequency counter

Please suggest a TNC & Radio compatible pair.

Now, in reality, how close can I get to what I want?

Regards, Chuck

---

## 12. Re: [NETSIG:3237] ?Increasing the speed of point-to-point link?

From: Sid Ashen-Brenner <sashen@midusa.net>  
Date: Fri, 06 Jun 1997 16:32:42 -0500  
To: netsig@tapr.org  
Message-ID: <3.0.32.19970606155948.006d080c@midusa.net>  
Rendered body type: text/plain

At 12:10 PM 6/6/97 -0500, you wrote:

>I would like to try to increase the speed of a point-to-point link  
>from 1200 baud to 9600 or more. What I want is:

>

>1. TNC & Radio cost <= \$850 (i.e. <= 2x the cost of 1200 baud).

TNC PacComm Spirit 2 or Kantronics KPC 9612+ under \$250.00

Radio TEKK KS-1000 around \$150.00

Amplifier RF Concepts 440 3 watts in/20 out @ \$129.95 or  
RF Concepts UHF-50 3 watts in/50 out @ \$249.95

Going the higher power, you're still under \$700.00

>2. Test equipment <= multimeter & frequency counter

>

> Please suggest a TNC & Radio compatible pair.

>

> Now, in reality, how close can I get to what I want?

Even at 1200 baud, it helps to have a deviation meter of some sort available!

Sid Ashen-Brenner Salina, Kansas  
Internet : sashen@midusa.net  
AX-25 : n0obm @ n0obm.#ncks.ks.usa.noam

---

## 13. Re: [NETSIG:3238] Re: ?Increasing the speed of point-to-point link?

From: "Thomas A. Moulton" <w2vy@gte.net>  
Date: Fri, 06 Jun 1997 21:26:32 -0400  
To: netsig@tapr.org  
Message-ID: <3398B8C8.A3954007@gte.net>  
Rendered body type: text/plain

Depending upon the distances, etc you might be better to spend the money

on a beam vs an amplifier...

The amp usually adds more TXDelay and a Beam does not...

---

#### 14. Re: [NETSIG:3239] Re: ?Increasing the speed of point-to-point link?

From: Sid Ashen-Brenner <sashen@midusa.net>  
Date: Fri, 06 Jun 1997 22:10:41 -0500  
To: netsig@tapr.org  
Message-ID: <3.0.32.19970606221031.006bc010@midusa.net>  
Rendered body type: text/plain

At 08:27 PM 6/6/97 -0500, you wrote:  
> Depending upon the distances, etc you might be better to spend the money  
>  
> on a beam vs an amplifier...  
>  
> The amp usually adds more TXDelay and a Beam does not...

No argument .... I just included the amp in expectation of "3 watts isn't enough power" I'm not using an amp here, but am using a beam. The beam was also considerably LESS expensive!

73 de Sid n0obm

Sid Ashen-Brenner Salina, Kansas  
Internet : sashen@midusa.net  
AX-25 : n0obm @ n0obm.#ncks.ks.usa.noam

---

#### 15. Re: ?Increasing the speed of point-to-point link?

From: Dave Maciorowski <waljkh@ix.netcom.com>  
Date: Sat, 07 Jun 1997 06:05:53 -0600  
To: netsig@tapr.org  
Message-ID: <199706071309.IAA03807@dfw-ix10.ix.netcom.com>  
Rendered body type: text/plain

Hi Chuck

At 12:10 PM 6/6/97 -0500, you wrote:  
> I would like to try to increase the speed of a point-to-point link  
> from 1200 baud to 9600 or more. What I want is:  
>  
> 1. TNC & Radio cost <= \$850 (i.e. <= 2x the cost of 1200 baud).  
>  
> 2. Test equipment <= multimeter & frequency counter  
>  
> Please suggest a TNC & Radio compatible pair.

I've done that here with the following:

TNC, KPC-9612 <\$250  
Motorola UHF Micor, crystaled <\$50

73,

Dave

-----

Dave Maciorowski, WA1JHK  
Colorado Repeater Association, Inc.  
Serving Colorado with Voice and Data, 6-Meters to 1.2 Gig

Internet: waljkh@ix.netcom.com or waljkh@amsat.org  
CRA: <http://www.rmsd.com/hamradio/cra/>

---

#### 16. Re: [NETSIG:3241] Re: ?Increasing the speed of point-to-point link?

From: "Charles E. Gelm" <gelmc@erinet.com>  
Date: Sat, 07 Jun 1997 10:53:11 -0700  
To: netsig@tapr.org  
Message-ID: <3399A007.4022@erinet.com>  
Rendered body type: text/plain

Dave Maciorowski wrote:  
>  
> Hi Chuck  
>  
> At 12:10 PM 6/6/97 -0500, you wrote:  
> > I would like to try to increase the speed of a point-to-point link  
> > from 1200 baud to 9600 or more. What I want is:  
> >  
> > 1. TNC & Radio cost <= \$850 (i.e. <= 2x the cost of 1200 baud).  
> >  
> > 2. Test equipment <= multimeter & frequency counter  
> >

> > Please suggest a TNC & Radio compatible pair.  
>  
> I've done that here with the following:  
>  
> TNC, KPC-9612 <\$250  
> Motorola UHF Micor, crystalized <\$50  
>  
> 73,  
>  
> Dave  
>  
> -----  
> Dave Maciorowski, WA1JHK  
> Colorado Repeater Association, Inc.  
> Serving Colorado with Voice and Data, 6-Meters to 1.2 Gig  
>  
> Internet: waljkh@ix.netcom.com or waljkh@amsat.org  
> CRA: http://www.rmsd.com/hamradio/cra/

Hi, Dave:

Great! Where can I get a "Motorola UHF Micor, crystalized <\$50" ?

Chuck

---

## 17. Re: [NETSIG:3239] Re: ?Increasing the speed of point-to-point link?

From: Chuck Hast <wchast@utilpart.com>  
Date: Sat, 07 Jun 1997 11:48:42 -0400  
To: netsig@tapr.org  
Message-ID: <339982DA.6D414175@utilpart.com>  
Rendered body type: text/plain

Thomas A. Moulton wrote:

> Depending upon the distances, etc you might be better to spend the  
> money  
>  
> on a beam vs an amplifier...  
>  
> The amp usually adds more TXDelay and a Beam does not...

You beat me to it Tom, this is what we have found here in the Tampa area, and I think that if you will talk to other areas where the TEKK radios are being used you will find that a good gain antenna is worth a lot more than the same amount of gain using a amp.

Besides you can keep your PSU's smaller and the heat generation is less.

Most of these amps have a relay of some sort in there, and just the process of getting the thing on the air adds to the TXD as Tom points out.

--

Chuck Hast  
wchast@utilpart.com

kp4djt

---

## 18. Re: [NETSIG:3237] ?Increasing the speed of point-to-point link?

From: Jeff King <jeff@mich.com>  
Date: Sat, 07 Jun 1997 12:39:52 -0400  
To: netsig@tapr.org  
Message-ID: <2.2.32.19970607163952.00971628@mail.mich.com>  
Rendered body type: text/plain

At 12:10 PM 6/6/97 -0500, Charles E. Gelm wrote:

>I would like to try to increase the speed of a point-to-point link  
>from 1200 baud to 9600 or more. What I want is:

>  
>1. TNC & Radio cost <= \$850 (i.e. <= 2x the cost of 1200 baud).  
>  
>2. Test equipment <= multimeter & frequency counter  
>  
> Please suggest a TNC & Radio compatible pair.  
>  
> Now, in reality, how close can I get to what I want?  
>  
>Regards, Chuck



FreeWave DGR-115 115,000 baud RF modem+PAD     \$1250 list

Why bother with 9600 baud when plug and play 115kbaud is off the shelf? You should be able to get the freewave for less, and if you don't want a case, they will sell you the board for \$700.

You of course can turn the serial data rate on the freewave to 9600bps should you so desire.  
Regards,

```
-----
| Jeff King      Aero Data Systems |
| jeff@mich.com  P.O. Box 510895   |
| (810)471-1787  Livonia, MI 48151 |
| F(810)471-0279 United States     |
-----
```

---

## 19. Re: [NETSIG:3243] Re: ?Increasing the speed of point-to-point link?

From: iw1cfl@ik1xht.ampr.org  
Date: Sat, 07 Jun 97 21:51:06 MET DST  
To: netsig@tapr.org  
Message-ID: <3080@ik1xht.ampr.org>  
Rendered body type: text/plain

And antenna cost less than an amplifier (I found here Fracarro 10 el. at \$10 each) and solve a lot of multipath distortion.  
You can also tweak a TV UHF panel antenna...

73  
Mike

--  
Michele Debandi - IW1CFL - Universita' di Torino  
Packet HomeBBS I1YLM.IPIE.ITA.EU -- Internet iw1cfl@linux1.cisi.unito.it  
AMPRnet iw1cfl@ik1xht.ampr.org - iw1cfl@iw1cfl.ampr.org [44.134.128.73]  
--

---

## 20. Re: [NETSIG:3244] Re: ?Increasing the speed of point-to-point link?

From: Chuck Hast <wchast@utilpart.com>  
Date: Sat, 07 Jun 1997 15:53:54 -0400  
To: netsig@tapr.org  
Message-ID: <3399BC52.A853892D@utilpart.com>  
Rendered body type: text/plain

Jeff King wrote:

```
> FreeWave DGR-115 115,000 baud RF modem+PAD     $1250 list
>
> Why bother with 9600 baud when plug and play 115kbaud is off
> the shelf? You should be able to get the freewave for less, and
> if you don't want a case, they will sell you the board for $700.
>
> You of course can turn the serial data rate on the freewave to
> 9600bps should you so desire.
```

Well let me see, if I remember, I think he could get the whole link for about

\$800.

|                                            |       |       |
|--------------------------------------------|-------|-------|
| Two PacComm Spirit NODE TNC's @ \$240 each | \$480 |       |
| Two TEKK radios @ \$160 each (a bit high)  |       | \$320 |

-----  
Total  
\$780

This of course does not include the antenna, or feedline, nor is there a amp included,  
but keep your gain in the antenna, and save your self TXD, power and grief.

I figure you probably already have feed line and antennas. For about +/- \$1K  
you can have the whole link including PSU feedline and antennas. This does 9k6.  
You can get a upgrade kit and move the TEKK's to 19k2. kit cost \$35/radio.  
Adding \$70 to the above cost you are now at \$850. So not bad price to get to  
19k2...on both ends.

Or you can purchase the radios already upgraded to 19k2. @ \$209 each.  
for a  
total cost TNC's + Radios = \$898.

It is not 49mhz boxes but it is not Motorola date ready Spectras either.

--  
Chuck Hast  
wchast@utilpart.com

kp4djt

---

## 21. Re: ?Increasing the speed of point-to-point link?

From: Don Lemke <wb9mjinwb9mjin.ampr.org>  
Date: Sat, 07 Jun 1997 14:42:57 -0500  
To: netsig@tapr.org  
Message-ID: <3399B9C1.610E@wb9mjin.ampr.org>  
Rendered body type: text/plain

Hi All,

If u need an amp, its better to use one of the commercial radios, with a designed in high power PA. They will be much more reliable than a tacked on Amateur voice-use-design external amp. We ve had good service from Motorola Mitrek's and Maxar (flexar, et all). These have 10.7 Mhz IF strips, and can be optimised for 9600 baud usage, with replacement filter cans, while retaining good ultimate rejection. Good IF ultimate rejection is a must at high sites, east of the Rockies, and west of Sierra Nevada mountains. And maybe some places inbetween.

One should make his antenna decission carefully. The decission to use a beam antenna, should not be taken without a good understanding if such an antenna will be reliable in ur location, for an affordable antenna model.

Beams can be problematic. Especially on 440 and above. End mounted yagi s tend to be mechanically succceptable, due to the cantilever mounting, and wind forces/iceloads centered out along the boom. Iceing does a double wamy on Yagi electrical performance. The Yagi is designed to work with air inbetween the elements. With Iceing, an appreciable amount of this space is replaced with a different dielectric material substance. Ice! This causes the phasing of the Yagi elements to be disturbed, causing the pattern to go to pot. This dephasing also effects the match. The mutual impedance of the parasitic elements, on the driven element is the reason the driven element needs to be matched. When the mutual impedance is changed by the different medium between the elements (Ice/Snow/Air, instead of Air), the yagi is no longer matched. The combination of these effects turns the antenna into a 0 dB gain, open circuit, effectively. When the path requires the yagi gain, the path goes away.

The lower u go in frequency, the less these effects, since the ice is not as big a fraction of the air between the elements. On 2 meters you probably would see more mechanical damage to yagi's, from iceing, than electrical problems. On 440, and higher tho, the iceing can be a significant problem. On a local 1.2 Ghz, 5 mile path, with 2 watt radios, and a first fresnel clearance, using F9FT long yagi, we saw complete drop out due to iceing here. The only time the path had ever dropped out! That s a pretty dramatic change!

Here in Chicagoland, when we are lucky, the sun comes out the next day, and even tho its well below freezing, the thermal absortion of the aluminum will melt a thin layer of the ice, and it will delaminate. But when we are unlucky, its cloudy for a month, and the link is gone for a month! Both of these circumstances have been experienced.

Low Cost gain omni's can be reasonable antennas for home locations. But, they should be avoided for linking where multipath is a problem. Some of these antennas use 14 gauge copper wire radiating elements. On 440, this is not the best idea. Since the surface area is quite small, and on UHF the depth of pentation very thin. The result is higher resistive losses. Long versions of these antennas tend to wip around in the wind. When they do, parts of packets can be lost, as the main lobe moves up and down. There are also the more rugged aluminum tube verticals. We ve had problem with water, and corrosion in these. One antenna type literally popped its top, after the water froze, and extruded up a tube, forcing the top half off! Tubing to casting joints tend to get corroded also. Aluminum materials are alloys. When they come in contact in a sliding joint with steel, or even a different alloy of aluminum, there can be bimetalic corrosion. A recent problem was had at

one of our sites here, when the antenna was wet, it worked, and when not, it didn't! The corroded interfaces between parts of the antenna were conducting, when they became wet. This is kinda backwards. Most antennas have trouble with rainy, not dry weather!

Omnis are not a good idea if there are reflecting surfaces in the area. Such as water tower, mountains, or a large downtown area, or when operating out of a building, with the antenna at the same level as moving objects.

9600 baud and higher is sensitive to delay distortion, that common multipath may cause. On 220 and higher frequencies, multipath is a problem. 220 was originally used by the navy to detect large metal objects (battleships), in the pre carrier days) trying to sneak thru harbor openings, in the fog, to surprise a fleet at anchor. A large urban skyscraper is about the same size as battle ship, and reflects just about like one! At one site here, we have the downtown area of the city 15 miles on the opposite bearing from a more suburban site. The outer site's 9600 baud signal is badly distorted, on occasion, from the reflections off the downtown buildings, as received at the middle site, on a 220 omni antenna.

When I first set up my 440/9600 baud station in my apartment, I was somewhat disappointed. I was using a J pole, to get to a node 8 miles away. There was plenty of signal, as I'm on the third floor. But, the signal was not stationary. That is, one hour it was solid in strength and copy, but a hour or two later, the strength or copy had changed. A slight movement of the J pole would usually restore the strength and/or copy. This is probably ok for voice, but not for 24/7 Email! There is a big water tower down the street. And, in combination with people and things moving around in the building, the signal varied a lot. Additionally, just because the signal was strong, did not mean it was a good copy on 9600 baud! This was weird. I had used my station on the Microsats, at the previous QTH, so it wasn't at fault. A unidirectional antenna solved the problem. The antenna used is not quite a beam, but it does have a very high front to back ratio. Copy is solid, and the signals always strong, now. Check out the website listed in my signature for a description of the antenna I found worked out here.

The point here is that path and antenna is what allows one to move to higher baud rate. Antennas with higher gain, are not always reliable. I think there's a Murphy's Law about this. The reliability of a technology falls by the square of its complexity. Or something like that! Yagi's are a very good example of this. Having 3 T/R switches, instead of one, as in a Tekk Radio/External Amp, versus a commercial high power radio. Ideally a link radio should have no T/R switches at all, and just be full duplex. Such as the Flexnet 1.2 Ghz link radios.

--

73, Don.

AMPRNet : wb9mjn@wb9mjn.ampr.org[44.72.98.19]  
Internet: wb9mjn@wb9mjn.ampr.org@uugate.aim.utah.edu  
Website: <http://www.qth.com/antpanel>

---

## 22. Re: [NETSIG:3244] Re: ?Increasing the speed of point-to-point link?

From: "Thomas A. Moulton" <w2vy@gte.net>  
Date: Sat, 07 Jun 1997 16:59:19 -0400  
To: netsig@tapr.org  
Message-ID: <3399CBA6.ACD4EF0E@gte.net>  
Rendered body type: text/plain

Jeff King wrote:

> FreeWave DGR-115 115,000 baud RF modem+PAD \$1250 list  
>  
> Why bother with 9600 baud when plug and play 115kbaud is off  
> the shelf? You should be able to get the freewave for less, and  
> if you don't want a case, they will sell you the board for \$700.  
>  
> You of course can turn the serial data rate on the freewave to  
> 9600bps should you so desire.  
> Regards,  
>  
> -----  
> | Jeff King Aero Data Systems |

> | jeff@mich.com P.O. Box 510895 |  
> | (810)471-1787 Livonia, MI 48151 |  
> | F(810)471-0279 United States |  
> -----

What band does it run on?

tom

---

### 23. Re: [NETSIG:3248] Re: ?Increasing the speed of point-to-point link?

From: Jeff King <jeff@mich.com>  
Date: Sat, 07 Jun 1997 21:02:57 -0400  
To: netsig@tapr.org  
Message-ID: <2.2.32.19970608010257.009627f4@mail.mich.com>  
Rendered body type: text/plain

At 04:02 PM 6/7/97 -0500, Thomas A. Moulton wrote:

>Jeff King wrote:

>

>> FreeWave DGR-115 115,000 baud RF modem+PAD \$1250 list

>

>What band does it run on?

>

>tom

>

Sorry, these are 900mhz spread spectrum transcievers.  
Try <http://www.freewave.com>

You'll spend \*far\* less \$ per bps with these then any  
'amateur' solution. They of course are Part 15 solutions.

Regards,

-----  
| Jeff King Aero Data Systems |  
| jeff@mich.com P.O. Box 510895 |  
| (810)471-1787 Livonia, MI 48151 |  
| F(810)471-0279 United States |  
-----

---

### 24. Re: [NETSIG:3244] Re: ?Increasing the speed of point-to-point link?

From: "Charles E. Gelm" <gelmce@erinet.com>  
Date: Sat, 07 Jun 1997 21:53:29 -0700  
To: netsig@tapr.org  
Message-ID: <339A3AC9.2C55@erinet.com>  
Rendered body type: text/plain

Jeff King wrote:

>

> At 12:10 PM 6/6/97 -0500, Charles E. Gelm wrote:

> >I would like to try to increase the speed of a point-to-point link

> >from 1200 baud to 9600 or more. What I want is:

> >

> >1. TNC & Radio cost <= \$850 (i.e. <= 2x the cost of 1200 baud).

> >

> >2. Test equipment <= multimeter & frequency counter

> >

> > Please suggest a TNC & Radio compatible pair.

> >

> > Now, in reality, how close can I get to what I want?

> >

> >Regards, Chuck

>

> FreeWave DGR-115 115,000 baud RF modem+PAD \$1250 list

>

> Why bother with 9600 baud when plug and play 115kbaud is off

> the shelf? You should be able to get the freewave for less, and

> if you don't want a case, they will sell you the board for \$700.

>

> You of course can turn the serial data rate on the freewave to

> 9600bps should you so desire.

> Regards,

>

> -----  
> | Jeff King Aero Data Systems |  
> | jeff@mich.com P.O. Box 510895 |

> | (810)471-1787 Livonia, MI 48151 |  
> |F(810)471-0279 United States |  
> -----Hi, Jeff:

"FreeWave DGR-115 115,000 baud RF modem+PAD \$1250 list"

Sounds like a radio to me. Is there a compatible TNC for it so that it will fulfill the first part of my item 1.

Will I need a new antenna and feedline? If yes,

How much will the new feedline and antenna cost?

Just with your response, it is already 3x the cost of 1200 baud. :-(

This link passes ~ 1 megabyte per day. It really doesn't matter whether it takes 1 hour or 10 seconds.

Thanks for the information, maybe the dgr-115 will come down in price later.

Regards, Chuck

## 25. Re: [NETSIG:3250] Re: ?Increasing the speed of point-to-point link?

From: Jeff King <jeff@mich.com>  
Date: Sat, 07 Jun 1997 22:52:39 -0400  
To: netsig@tapr.org  
Message-ID: <2.2.32.19970608025239.0097e1f4@mail.mich.com>  
Rendered body type: text/plain

At 08:53 PM 6/7/97 -0500, Charles E. Gelm wrote:  
>Hi, Jeff:  
>  
> "FreeWave DGR-115 115,000 baud RF modem+PAD \$1250 list"  
>  
> Sounds like a radio to me. Is there a compatible TNC for it so that it  
>will fulfill the first part of my item 1.

PAD = Packet Assembler/Disassembler (TNC in ham lingo)

You asked for a point to point link. Two freewaves would look like a null modem cable.

>  
>Will I need a new antenna and feedline? If yes,

I don't know if you already have a 900mhz antenna at the site, if not, you will need one.

>  
>How much will the new feedline and antenna cost?

Lets see, LMR-400 goes for about .40 a foot. Switch(sp?) sells a nice 900mhz yagi for about \$89.00 or so.

>  
>Just with your response, it is already 3x the cost of 1200 baud. :-(

Ahhh.... yeah, OK? Its also 96 times faster. Didn't you want something faster? You might as well just stay at 1200 then (see comments below).

>  
> This link passes ~ 1 megabyte per day. It really doesn't matter whether  
>it takes 1 hour or 10 seconds.

24 hour/1megabyte = 115.74\* bps

1 hour/1megabyte = 2777\* bps

10 seconds/1megabyte = 1,000,000\* bps

\*assumes full use of frequency with no times for acks and turnaround. Real world I would multiply/divide everything by 4X.

Since you only need to move 1 megabyte a day, you might as well stay with 1200 baud.

My point was for just a little bit more (or less) you could have a high speed low latency link that would shame any 9.6k/19.2k amateur link. Assuming your labor is not free, it would be far cheaper to use the FreeWaves then any

homebrew arrangement that has been discussed here for 9.6k operation.

>  
> Thanks for the information, maybe the dgr-115 will come down in price later.  
>  
>Regards, Chuck  
>  
>  
Regards,

```
-----  
| Jeff King      Aero Data Systems |  
| jeff@mich.com  P.O. Box 510895   |  
| (810)471-1787  Livonia, MI 48151  |  
| F(810)471-0279 United States     |  
-----
```

---

## 26. Re: [NETSIG:3251] Re: ?Increasing the speed of point-to-point

From: "Thomas A. Moulton" <w2vy@gte.net>  
Date: Sun, 08 Jun 1997 00:18:36 -0400  
To: netsig@tapr.org  
Message-ID: <339A329B.2B02BBEC@gte.net>  
Rendered body type: text/plain

Jeff King wrote:

> My point was for just a little bit more (or less) you could have a  
> high speed  
> low latency link that would shame any 9.6k/19.2k amateur link. Assuming  
> your  
> labor is not free, it would be far cheaper to use the FreeWaves then  
> any  
> homebrew arrangement that has been discussed here for 9.6k operation.  
>  
Jeff,

Some of the solutions are NOT homebrew. You can buy a 9600 (or 19200)  
baud TNC/Radio  
all ready to go out of the box and the sooner people realize that the  
sooner we'll start seeing  
some better links.

It is true that you can save some money by doing some of it yourself,  
but we're not talking about  
wire-wrapping the TX and RX decks together and using a clip lead as the  
power switch!

I saw a price of \$400 for the TNC and Radio, I am not sure what kind of  
packaging but I am sure that  
if it were NONE that an extra \$100 could solve that problem.

That could get Both ends about \$1000, in an off the shelf solution...

Also as a part 15 device they must endure interference which would slow  
them down a bit...

VY 73, tom

---

## 27. Re: [NETSIG:3249] Re: ?Increasing the speed of point-to-point

From: Barry McLarnon VE3JF <bm@lynx.ve3jf.ampr.org>  
Date: Sun, 8 Jun 1997 05:17:11 +0000 (GMT)  
To: netsig@tapr.org  
Message-ID: <199706080517.FAA14189@lynx.ve3jf.ampr.org>  
Rendered body type: text/plain

Jeff King <jeff@mich.com> wrote:

> At 04:02 PM 6/7/97 -0500, Thomas A. Moulton wrote:  
> >Jeff King wrote:  
> >  
> >> FreeWave DGR-115 115,000 baud RF modem+PAD \$1250 list  
> >  
> >  
> >What band does it run on?  
> >  
> >tom  
> >  
> >  
> Sorry, these are 900mhz spread spectrum transcievers.

> Try <http://www.freewave.com>  
>  
>  
> You'll spend \*far\* less \$ per bps with these than any  
> 'amateur' solution. They of course are Part 15 solutions.

Put another way, it costs in the neighborhood of \$50/Kbps to do 9600 bps. If you go to 56 Kbps, using the WA4DSY modem, that gets the cost down to down to \$15/Kbps or so, and the FreeWave units move the price point down to about \$10/Kbps. It doesn't stop there - consider the WaveLAN cards, which some of us bought for \$200 each last year. This is a complete 2 Mbps radio/modem/PC interface on a card, for a mere 10 cents/Kbps! Of course, there are other factors to consider - power (WaveLANs are only 0.25 W), range, etc... but in circumstances where these higher-speed solutions would work, I would certainly think twice about settling for 9600 bps.

Barry

--

|                             |                                                                             |
|-----------------------------|-----------------------------------------------------------------------------|
| Barry McLarnon VE3JF/VA3TCP | Internet: <a href="mailto:bm@hydra.carleton.ca">bm@hydra.carleton.ca</a>    |
| Ottawa Amateur Radio Club   | AMPRnet: <a href="mailto:bm@lynx.ve3jf.ampr.org">bm@lynx.ve3jf.ampr.org</a> |
| Packet Working Group        | Web: <a href="http://hydra.carleton.ca">http://hydra.carleton.ca</a>        |

---

## 28. Re: [NETSIG:3251] Re: ?Increasing the speed of point-to-point

From: "Charles E. Gelm" <[gelmce@erinet.com](mailto:gelmce@erinet.com)>  
Date: Sun, 08 Jun 1997 08:23:57 -0700  
To: [netsig@tapr.org](mailto:netsig@tapr.org)  
Message-ID: <339ACE8D.16FC@erinet.com>  
Rendered body type: text/plain

Jeff King wrote:

<snipped>

> My point was for just a little bit more (or less) you could have a high speed  
> low latency link that would shame any 9.6k/19.2k amateur link. Assuming your  
> labor is not free, it would be far cheaper to use the FreeWaves than any  
> homebrew arrangement that has been discussed here for 9.6k operation.<snipped to end>

Hi, Jeff:

I agree. You have strong evidence that the freewave dgr-115+pad would be powerfully faster than suggested 9k6/19k2 systems. Now, are they available for a ham band and are their emissions are legal ?

Regards, Chuck

---

## 29. Re: [NETSIG:3254] Re: ?Increasing the speed of point-to-point

From: Kathy King <[jeff@mich.com](mailto:jeff@mich.com)>  
Date: Sun, 08 Jun 1997 19:39:20 -0400  
To: [netsig@tapr.org](mailto:netsig@tapr.org), [netsig@tapr.org](mailto:netsig@tapr.org)  
Message-ID: <2.2.32.19970608233920.009901f0@mail.mich.com>  
Rendered body type: text/plain

At 07:38 AM 6/8/97 -0500, Charles E. Gelm wrote:

> Hi, Jeff:

>

> I agree. You have strong evidence that the freewave dgr-115+pad would be  
> powerfully faster than suggested 9k6/19k2 systems. Now, are they available  
> for a ham band and are their emissions are legal ?

>

> Regards, Chuck

>

902-928Mhz is a ham band in the United States. Right now, without a STA, the emissions would not be legal under Part 97 but they are perfectly legal under Part 15. However, getting on a STA to use them is easy, and if they rule making (97-12) goes through, they will be legal under part 97.

However, I see no reason not to use one immediately under part 15. Frankly, there are many legal advantages to running under part 15 as opposed to part 97, one being no (little) concern of FCC liability with regards to content.

The limitations on Part 15 operation are as follows:

4 watts ERP  
1 watt output power

I've gotten a freewave to work on a 12 mile path using about 25milliwatts. I know of others that have gone 20 or more miles with them. Of course, at 900mhz you really want to strive for a true LOS path, but they will work over shorter foliage obstructed paths. They won't go through mountains and don't have enough ERP to do any tropo scatter.

If you want a 'true' amateur (97) solution however, your best bet is the WA4DSY GRAPES modem boards coupled with the PI-2 driver board (which I believe Barry has discussed). As I consider myself a radio experimenter, without regard to service type, I just tossed out the part 15 devices for you to consider as being the best bang for the buck.

Regards,

```
-----
| Jeff King      Aero Data Systems |
| jeff@mich.com  P.O. Box 510895   |
| (810)471-1787  Livonia, MI 48151 |
| F(810)471-0279 United States     |
-----
```

---

### 30. Re: [NETSIG:3247] Re: ?Increasing the speed of point-to-point link?

From: Barry McLarnon VE3JF <bm@lynx.ve3jf.ampr.org>  
Date: Mon, 9 Jun 1997 03:59:57 +0000 (GMT)  
To: netsig@tapr.org  
Message-ID: <199706090359.DAA15467@lynx.ve3jf.ampr.org>  
Rendered body type: text/plain

Don Lemke <wb9mjn@wb9mjn.ampr.org> wrote:

> One should make his antenna decision carefully. The decision to  
> use a beam antenna, should not be taken without a good understanding if  
> such an antenna will be reliable in ur location, for an affordable  
> antenna model.  
>  
> Beams can be problematic. Especially on 440 and above. End  
> mounted yagi's tend to be mechanically susceptible, due to the  
> cantilever mounting, and wind forces/iceloads centered out along the  
> boom. Iceing does a double wamy on Yagi electrical performance. The Yagi  
> is designed to work with air inbetween the elements. With Iceing, an  
> appreciable amount of this space is replaced with a different dielectric  
> material substance. Ice! This causes the phasing of the Yagi elements to  
> be disturbed, causing the pattern to go to pot. This dephasing also  
> effects the match. The mutual impedance of the parasitic elements, on  
> the driven element is the reason the driven element needs to be matched.  
> When the mutual impedance is changed by the different medium between the  
> elements (Ice/Snow/Air, instead of Air), the yagi is no longer matched.  
> The combination of these effects turns the antenna into a 0 dB gain,  
> open circuit, effectively. When the path requires the yagi gain, the  
> path goes away.  
>  
> The lower u go in frequency, the less these effects, since the ice is  
> not as big a fraction of the air between the elements. On 2 meters you  
> probably would see more mechanical damage to yagi's, from iceing, than  
> electrical problems. On 440, and higher tho, the iceing can be a  
> significant problem. On a local 1.2 Ghz, 5 mile path, with 2 watt  
> radios, and a first fresnel clearance, using F9FT long yagi, we saw  
> complete drop out due to iceing here. The only time the path had ever  
> dropped out! That s a pretty dramatic change!  
>  
> Here in Chicagoland, when we are lucky, the sun comes out the next day,  
> and even tho its well below freezing, the thermal absorption of the  
> aluminum will melt a thin layer of the ice, and it will delaminate. But  
> when we are unlucky, its cloudy for a month, and the link is gone for a  
> month! Both of these circumstances have been experienced.

This why, in commercial use, UHF yagis are often covered with a fiberglass radome. Has anyone come up with a good homebrew technique for keeping ice away from yagi elements? Aside from the obvious ones, of course (indoor installation, move to Hawaii, etc)... :-)



Barry

--

Barry McLarnon VE3JF/VA3TCP | Internet: bm@hydra.carleton.ca  
Ottawa Amateur Radio Club | AMPRnet: bm@lynx.ve3jf.ampr.org  
Packet Working Group | Web: http://hydra.carleton.ca

### 31. Re: [NETSIG:3256] Re: ?Increasing the speed of point-to-point link?

From: Burt Lang <burt@roccler.qc.ca>  
Date: Mon, 09 Jun 1997 09:35:00 +0000  
To: netsig@tapr.org  
Message-ID: <339BCE44.6582@roccler.qc.ca>  
Rendered body type: text/plain

Barry McLarnon VE3JF wrote:

>  
> Don Lemke <wb9mjin@wb9mjin.ampr.org> wrote:  
> > One should make his antenna decision carefully. The decision to  
> > use a beam antenna, should not be taken without a good understanding if  
> > such an antenna will be reliable in ur location, for an affordable  
> > antenna model.  
> >  
> > Beams can be problematic. Especially on 440 and above. End  
> > mounted yagi's tend to be mechanically susceptible, due to the  
> > cantilever mounting, and wind forces/iceloads centered out along the  
> > boom. Iceing does a double wamy on Yagi electrical performance. The Yagi  
> > is designed to work with air inbetween the elements. With Iceing, an  
> > appreciable amount of this space is replaced with a different dielectric  
> > material substance. Ice! This causes the phasing of the Yagi elements to  
> > be disturbed, causing the pattern to go to pot. This dephasing also  
> > effects the match. The mutual impedance of the parasitic elements, on  
> > the driven element is the reason the driven element needs to be matched.  
> > When the mutual impedance is changed by the different medium between the  
> > elements (Ice/Snow/Air, instead of Air), the yagi is no longer matched.  
> > The combination of these effects turns the antenna into a 0 dB gain,  
> > open circuit, effectively. When the path requires the yagi gain, the  
> > path goes away.  
> >  
> > The lower u go in frequency, the less these effects, since the ice is  
> > not as big a fraction of the air between the elements. On 2 meters you  
> > probably would see more mechanical damage to yagi's, from iceing, than  
> > electrical problems. On 440, and higher tho, the iceing can be a  
> > significant problem. On a local 1.2 Ghz, 5 mile path, with 2 watt  
> > radios, and a first fresnel clearance, using F9FT long yagi, we saw  
> > complete drop out due to iceing here. The only time the path had ever  
> > dropped out! That's a pretty dramatic change!  
> >  
> > Here in Chicagoland, when we are lucky, the sun comes out the next day,  
> > and even tho its well below freezing, the thermal absorption of the  
> > aluminum will melt a thin layer of the ice, and it will delaminate. But  
> > when we are unlucky, its cloudy for a month, and the link is gone for a  
> > month! Both of these circumstances have been experienced.  
> >  
> > This why, in commercial use, UHF yagis are often covered with a fiberglass  
> > radome. Has anyone come up with a good homebrew technique for keeping ice  
> > away from yagi elements? Aside from the obvious ones, of course (indoor  
> > installation, move to Hawaii, etc)... :-)  
> >  
> Barry  
>

Other than heated radomes, there is no real way of keeping real serious ice accumulations from antennas. If there was it would be used on Mount Washington and it isn't.

There are other antenna considerations that have not been mentioned.  
>From experience I would say NEVER use gamma or Tee matched antennas. I have seen gamma matched antennas detuned with just rain. A minor ice storm with less than 1/4 in of ice took out a 3 mile link (with 15w radios) that was equipped with gammamatched amateur type antennas. The remainder of the network was equipped with commercial grade low-Q antennas which were not affected noticeably. That's not 0 dB gain, its more like -30 dB gain.

The only antennas that should be considered for a mountain top site are low-Q, broadband heavy duty commercial grade antennas. Such an antenna will be much less affected by ice and other environmental conditions. An example of such an antenna would be the Sinclair SRL-307EB - 7

element, 9 dBd gain, 3 ft long end mounted, all welded construction with 3/8 in dia solid elements and an internally matched folded driven element. I make a functional equivalent that is even heavier than the Sinclair and can attest to its ruggedness and reliability. I can put 100 lbs on the end of the boom without it bending. We use them throughout our network.

Do not use "long, high gain antennas". If you need that much gain, you need a different site. Long antennas are fragile and typically very hi-Q. The highest gain Low-Q antenna practical on commercial sites might be a 60 deg corner reflector (maybe) with multiple driven elements but then you have the large windloading area.

On many commercial sites, the rules or the site manager will forbid light duty amateur grade antennas. On some sites only welded aluminum construction with stainless or heavy dipped galvanized hardware is allowed. They don't want light duty antennas breaking apart or riveted joints getting noisy or whatever. Keep your site manager happy and use proper commercial grade antennas from the start.

For a further discussion of link requirements, see my article:

<http://www.cam.org/~burt/neda/linkprio.html>

73

Burt VE2BMQ>>>

---

## 32. Re: [NETSIG:3257] Re: ?Increasing the speed of point-to-point link?

From: Marvin Munster <mmunster@qualcomm.com>  
Date: Mon, 09 Jun 1997 08:27:06 -0700  
To: netsig@tapr.org  
Message-ID: <3.0.1.32.19970609082706.0094d7d0@houdini.qualcomm.com>  
Rendered body type: text/plain

At 08:37 AM 6/9/97 -0500, Burt Lang wrote:

>Barry McLarnon VE3JF wrote:

>>

>> Don Lemke <wb9mjn@wb9mjn.ampr.org> wrote:

>> > One should make his antenna decision carefully. The decision to  
>> > use a beam antenna, should not be taken without a good understanding if  
>> > such an antenna will be reliable in ur location, for an affordable  
>> > antenna model.

>> >

>> > Beams can be problematic. Especially on 440 and above. End  
>> > mounted yagi's tend to be mechanically susceptible, due to the  
>> > cantilever mounting, and wind forces/iceloads centered out along the  
>> > boom. Iceing does a double wamy on Yagi electrical performance. The Yagi  
>> > is designed to work with air inbetween the elements. With Iceing, an  
>> > appreciable amount of this space is replaced with a different dielectric  
>> > material substance. Ice! This causes the phasing of the Yagi elements to  
>> > be disturbed, causing the pattern to go to pot. This dephasing also  
>> > effects the match. The mutual impedance of the parasitic elements, on  
>> > the driven element is the reason the driven element needs to be matched.  
>> > When the mutual impedance is changed by the different medium between the  
>> > elements (Ice/Snow/Air, instead of Air), the yagi is no longer matched.  
>> > The combination of these effects turns the antenna into a 0 dB gain,  
>> > open circuit, effectively. When the path requires the yagi gain, the  
>> > path goes away.

>> >

>> > The lower u go in frequency, the less these effects, since the ice is  
>> > not as big a fraction of the air between the elements. On 2 meters you  
>> > probably would see more mechanical damage to yagi's, from iceing, than  
>> > electrical problems. On 440, and higher tho, the iceing can be a  
>> > significant problem. On a local 1.2 Ghz, 5 mile path, with 2 watt  
>> > radios, and a first fresnel clearance, using F9FT long yagi, we saw  
>> > complete drop out due to iceing here. The only time the path had ever  
>> > dropped out! That s a pretty dramatic change!

>> >

>> > Here in Chicagoland, when we are lucky, the sun comes out the next day,  
>> > and even tho its well below freezing, the thermal absorption of the  
>> > aluminum will melt a thin layer of the ice, and it will delaminate. But  
>> > when we are unlucky, its cloudy for a month, and the link is gone for a  
>> > month! Both of these circumstances have been experienced.

>> >

>> This why, in commercial use, UHF yagis are often covered with a fiberglass  
>> radome. Has anyone come up with a good homebrew technique for keeping ice  
>> away from yagi elements? Aside from the obvious ones, of course (indoor  
>> installation, move to Hawaii, etc)... :-)

>>  
>> Barry  
>>  
>  
>Other than heated radomes, there is no real way of keeping real serious  
>ice accumulations from antennas. If there was it would be used on Mount  
>Washington and it isn't.  
>  
>There are other antenna considerations that have not been mentioned.  
>>From experience I would say NEVER use gamma or Tee matched antennas. I  
>have seen gamma matched antennas detuned with just rain. A minor ice  
>storm with less than 1/4 in of ice took out a 3 mile link (with 15w  
>radios) that was equipped with gammamatched amateur type antennas. The  
>remainder of the network was equipped with commercial grade low-Q  
>antennas which were not affected noticeably. That's not 0 dB gain, its  
>more like -30 dB gain.  
>  
>The only antennas that should be considered for a mountain top site are  
>low-Q, broadband heavy duty commercial grade antennas. Such an antenna  
>will be much less affected by ice and other environmental conditions.  
>An example of such an antenna would be the Sinclair SRL-307EB - 7  
>element, 9 dBd gain, 3 ft long end mounted, all welded construction with  
>3/8 in dia solid elements and an internally matched folded driven  
>element. I make a functional equivalent that is even heavier than the  
>Sinclair and can attest to its ruggedness and reliability. I can put  
>100 lbs on the end of the boom without it bending. We use them  
>throughout our network.  
>  
>Do not use "long, high gain antennas". If you need that much gain, you  
>need a different site. Long antennas are fragile and typically very  
>hi-Q. The highest gain Low-Q antenna practical on commercial sites  
>might be a 60 deg corner reflector (maybe) with multiple driven elements  
>but then you have the large windloading area.  
>  
>On many commercial sites, the rules or the site manager will forbid  
>light duty amateur grade antennas. On some sites only welded aluminum  
>construction with stainless or heavy dipped galvanized hardware is  
>allowed. They don't want light duty antennas breaking apart or rivited  
>joints getting noisy or whatever. Keep your site manager happy and use  
>proper commercial grade antennas from the start.  
>  
>For a further discussion of link requirements, see my article:  
>  
><http://www.cam.org/~burt/neda/linkprio.html>  
>  
>73  
>  
>Burt VE2BMQ>>>  
>  
You might consider Swiech antennas. He makes a great commercial grade beam  
that can stand up against the aforementioned antenna afflictions. Give him  
a call. I have seen these antennas, and I am going to use them over the  
Sinclair, which we have several in our voice system at this time. His  
construction commands a new standard of excellence. I don't have his  
address handy right now, but you might look in QST or CQ.

Marvin - WB6PKK

---

### 33. Re: [NETSIG:3258] Re: ?Increasing the speed of point-to-point

From: Mike Curtis <wd6ehr@kaiwan.com>  
Date: Mon, 9 Jun 1997 10:05:36 -0700 (PDT)  
To: netsig@tapr.org  
Message-ID: <Pine.SUN.3.95.970609100300.220248-100000@kaiwan009.kaiwan.com>  
Rendered body type: text/plain

<BIG snip of text we've all read several times already>

Just a reminder, folks - cut out all text you don't NEED in your replies.

-- mike

---

### 34. Re: ?Increasing the speed of point-to-point

From: Don Lemke <wb9mjn@wb9mjn.ampr.org>  
Date: Mon, 09 Jun 1997 12:07:07 -0500  
To: netsig@tapr.org  
Message-ID: <339C383A.5153@wb9mjn.ampr.org>  
Rendered body type: text/plain

Hi Barry, Burt and Marvin,

Thanks for all those comments. :-) But I'm sure a few of you realise I have my own take on solutions to these problems. If you'll check out the web page listed below you all will see it.

I build panel antennas. I started thinking about developing panel antennas because of the problems with yagi's in our packet networks. And finally did it, when I needed flat antenna, with excellent F/B ratio for the 9600 baud 440 from my apartment.

In a panel antenna the radiation occurs out of a vertical surface not along a horizontal tube. A vertical surface is less prone to icing. In this respect, the panel is like a professional dish antenna system. The top edge of the surface may collect ice, but along the majority of the surface, the coating will be thin or non-existent. The front skin of my antennas is a material actually designed for a minimum of ice accumulation in its primary market. It has a textured finish, to promote delamination of ice.

I build the panel antennas with the stressed skin mechanical engineering structure. Thus, the fiberglass raydome is actually part of the antenna's structure. It's part of the design from the start, not an after thought. This is what my favorite EE professor would have called an "ellegant" solution, :-).

In my panel antenna, all the electrical connections are sweat soldered, or sealed up inside, or both.

Yagi's are reasonable antennas for attended stations, with uncritical usage. If it ices up, you shake the tower, and de-ice it! If it doesn't deice, hey, it's only my station, and I'll just go watch golf from Hawaii on the tube today! But that economy is false for reliable operations from unattended and/or remote sites, that lots of people in a club expect to be able to actually use.

--

73, Don.

AMPRNet : wb9mjn@wb9mjn.ampr.org[44.72.98.19]  
Internet: wb9mjn@wb9mjn.ampr.org@uugate.aim.utah.edu  
Website: <http://www.qth.com/antpanel>

---

### 35. Re: [NETSIG:3251] Re: ?Increasing the speed of point-to-point

From: Mike Curtis <wd6ehr@kaiwan.com>  
Date: Mon, 9 Jun 1997 10:21:57 -0700 (PDT)  
To: netsig@tapr.org  
Message-ID: <Pine.SUN.3.95.970609101309.22024D-100000@kaiwan009.kaiwan.com>  
Rendered body type: text/plain

On Sat, 7 Jun 1997, Jeff King wrote:

> At 08:53 PM 6/7/97 -0500, Charles E. Gelm wrote:

> > This link passes ~ 1 megabyte per day. It really doesn't matter whether  
> > it takes 1 hour or 10 seconds.

Not today, but what about tomorrow? You'll find that bandwidth is NEVER "wasted". If you have links that'll handle that kind of data - and ACCESS to these links that allows users to utilize it - they'll find ways to fill it. We have one rather backward-thinking BBS op here who signs his mail "Use 1200 baud - it's the speed we type at". As long as quaint notions about packet like this prevail, we may as well stay at 1200 baud. But if we look at what we have on the Internet and would like to have some of that capacity on ham radio networks, then it definitely DOES matter how long it takes to pass a megabyte.

-- IronMan Mike Curtis  
Cassette available - email for details

---

### 36. re: antennas

From: gilw9bub@nw4ep.ih.lucent.com (Gil Kowols)  
Date: Mon, 9 Jun 1997 12:52:15 -0500 (CDT)  
To: tapr.org!netsig@nw4ep.ih.lucent.com  
Message-ID: <m0wb8c3-00015FC@w9bub>  
Rendered body type: text/plain

Forwarded message:  
Return-Path: <nw4ep!w9bub.lucent.com!gil>  
Received: by svcs.com (SMI-8.6/SMI-SVR4)  
id MAA10243; Mon, 9 Jun 1997 12:29:50 -0500  
>Received: from w9bub.UUCP by nw4ep.ih.lucent.com (4.1/EMS-L SunOS)  
id AA04568; Mon, 9 Jun 97 12:29:10 CDT  
From: gilw9bub@nw4ep.ih.lucent.com (Gil Kowols)  
To: tapr.org!netsig@nw4ep.ih.lucent.com  
Received: from nw4ep by grayfox.SVS.COM; Mon, 9 Jun 1997 12:29 CDT  
Received: from w9bub.UUCP by nw4ep.ih.lucent.com (4.1/EMS-L SunOS)  
id AA04568; Mon, 9 Jun 97 12:29:10 CDT  
Received: by w9bub (Smail3.1.29.1 #3)  
id m0wb7mI-00015FC; Mon, 9 Jun 97 11:58 CDT  
Message-Id: <m0wb7mI-00015FC@w9bub>  
Original-From: gilw9bub (Gil Kowols)  
Subject: [NETSIG:3257] Re: ?Increasing the speed of point-to-point link? (fwd)  
Original-To: nw4ep!grayfox!tapr.org!netsig  
Date: Mon, 9 Jun 1997 11:58:46 -0500 (CDT)  
X-Mailer: ELM [version 2.4 PL25]  
Mime-Version: 1.0  
Content-Transfer-Encoding: 7bit  
Content-Type: text/plain; charset=US-ASCII  
content-length: 1558

Forwarded message:  
> Barry McLarnon VE3JF wrote:  
> >  
> > Don Lemke <wb9mjn@wb9mjn.ampr.org> wrote:  
> > > One should make his antenna decision carefully. The decision to  
> > > use a beam antenna, should not be taken without a good understanding if  
> > >  
> > This why, in commercial use, UHF yagis are often covered with a fiberglass  
> > radome. Has anyone come up with a good homebrew technique for keeping ice  
> > away from yagi elements? Aside from the obvious ones, of course (indoor  
> > installation, move to Hawaii, etc)... :-)  
> >  
> > Barry  
> >  
>  
> Other than heated radomes, there is no real way of keeping real serious  
> ice accumulations from antennas. If there was it would be used on Mount  
> Washington and it isn't.  
>  
Not really true. The down side is the increased windloading on  
the mounting. The windloading of a yagi is quite low. Add the  
surface area of a radome and the windloading goes up easily by an  
order of magnitude. This force is usually translated into a  
turning moment on the beam mounting. Result, the beam moves.  
Hence it's usually not used.

A simple way to keep ice from forming is to wax the surface.  
Another way is a chemical film whose name I don't recall but ius  
used extensively on satellite antenna surfaces to keep snow and  
ice from accumulating. Only hore ice forms on vertical surfaces  
and it also can effect patterns.

There are helix antennas available and used extensively in the US  
Forest Service where the helix elements are embedded in epoxy.  
These do not detune with ice.

gil, w9bub

---

### 37. Re: [NETSIG:3258] Re: ?Increasing the speed of point-to-point

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>  
Date: Mon, 9 Jun 1997 13:41:03 -0500  
To: netsig@tapr.org  
Message-ID: <v0302093dafc1fe35914c@[192.168.1.2]>

Rendered body type: text/plain

>You might consider Swiech antennas. He makes a great commercial grade beam  
>that can stand up against the aforementioned antenna afflictions. Give him  
>a call. I have seen these antennas, and I am going to use them over the  
>Sinclair, which we have several in our voice system at this time. His  
>construction commands a new standard of excellence. I don't have his  
>address handy right now, but you might look in QST or CQ.  
>  
>Marvin - WB6PKK

I have four of them -- they are not bad, but a little pricey for most  
installation and to be used in networking cost is everything on our  
budgets.

The down side is that it takes them months to build them (three months to  
get mine) and you have to accept COD cash deliveries. Thus you have to send  
UPS away and have them come back the next day once you have visited the  
back to get the necessary cash to pay for the delivery.

Cheers - Greg

-----  
Greg Jones, WD5IVD  
Austin, Texas  
wd5ivd@tapr.org  
<http://www.tapr.org/~wd5ivd>  
-----

---

### 38. re: antennas

From: Don Lemke <wb9mjn@wb9mjn.ampr.org>  
Date: Mon, 09 Jun 1997 14:45:09 -0500  
To: netsig@tapr.org  
Message-ID: <339C5D45.3BCC@wb9mjn.ampr.org>  
Rendered body type: text/plain

Hi Gil (!),

I m glad to see a person with ur extensive antenna experience  
commenting on this subject.

But, would a wax be practical for an antenna mounted up a tower? On  
a ground mounted earth station dish, it could be easily reapplied each  
fall. Isn't the wax intended to fail, and delaminate with the ice? And  
would not the sun evaporate it eventually? On tubular surfaces, would  
not the abrasive effects of rain cause it to be worn away?

I like the idea of a chemical film. They use a plastic film on the  
underside of racing yachts, and airplanes. The boating people call it  
"Shark Skin" If i remember right. An antenna version with a triangular  
cross section could be developed, and set so the grain was vertical, as  
the ice froze, the expansion forces of the ice should push away from the  
surface, and micro-fracture the ice. In a good wind, the ice should then  
delaminate. The Mechanical Engineering still needs to be done. Soas, a  
stiff enuf film material is found, that would resist the ice freezing  
pressure, rather than just compress, and key the ice in place.

Hore Ice being mostly air, and the 440 panel antenna being kinda  
broad in the beamwidth (90 degrees), should not effect the 440 panel  
antenna pattern, significantly.

--

73, Don.

AMPRNet : wb9mjn@wb9mjn.ampr.org[44.72.98.19]  
Internet: wb9mjn%wb9mjn.ampr.org@uugate.aim.utah.edu  
Website: <http://www.qth.com/antpanel>

---

### 39. [NETSIG:3264] re: antennas (fwd)

From: gil@w9bub@nw4ep.ih.lucent.com (Gil Kowols)  
Date: Mon, 9 Jun 1997 17:19:37 -0500 (CDT)  
To: tapr.org!netsig@nw4ep.ih.lucent.com  
Message-ID: <m0wbCmo-00016QC@w9bub>  
Rendered body type: text/plain

Forwarded message:

>

> Hi Gil (!),

>  
> I m glad to see a person with ur extensive antenna experience  
> commenting on this subject.  
>  
> But, would a wax be practical for an antenna mounted up a tower? On  
> a ground mounted earth station dish, it could be easily reapplied each  
> fall. Isn t the wax intended to fail, and delaminate with the ice? And  
> would not the sun evaporate it eventually? On tubular surfaces, would  
> not the abrasive effects of rain cause it to be worn away?  
>  
Well, I wouldn't expect anyone to mount the antenna with radome  
300 ft. on a tower with that windloading. Usually , when you wax  
your car , it lasts well over a year, and except for the car wash  
soaps, it would last longer. The car exposure is similar to the  
radome on a tower.

Anyway, I expe;ct you would use the radome on a yagi on a stubb  
tower subject to ice and snow on a mountain top rather than the  
afore mentioned tower.

Wax is rather tough and it will stick to many things, so i don't  
expect it to "fall off".

We used it on radomes and it lasted for years. Use paste rather  
than any of the sprays or liquid waxes.

> I like the idea of a chemical film. They use a plastic film on the  
> underside of racing yachts, and airplances. The boating people call it  
> pressure, rather than just compress, and key the ice in place.  
>  
I can't remember the name of the chemical. But I've used it on  
satellite dishes. Ice and now just slides off. As I recall,  
it was related to teflon and was just wiped on.

Another possibility is to wrap the boom with heater wire . The heat on  
the boom would conduct to the elements and keep the ice from forming. A  
differential thermostat set to only allow the heater to come on between  
25 deg and 35 deg. (F.) would keep the power drain down. 100  
watts of power would keep a 7 element beam clear.

We did this on the 450/900 MHz feeds for the parabolic dishes and worked  
great.

gil, w9bub

---

#### 40. Re: [NETSIG:3258] Re: ?Increasing the speed of point-to-point

From: Dale Seaburg <dseaburg@web-access.net>  
Date: Mon, 09 Jun 1997 19:54:58 -0500  
To: netsig@tapr.org  
Message-ID: <339CA5E2.370F@web-access.net>  
Rendered body type: text/plain

Marvin Munster wrote:  
>  
> snip...

> You might consider Swiech antennas. He makes a great commercial grade beam  
> that can stand up against the aforementioned antenna afflictions. Give him  
> a call. I have seen these antennas, and I am going to use them over the  
> Sinclair, which we have several in our voice system at this time. His  
> construction commands a new standard of excellence. I don't have his  
> address handy right now, but you might look in QST or CQ.  
>  
> Marvin - WB6PKK

-----

A quick search found this URL: <http://home.aol.com/ESwiech>

Dale - KG5LT

---

#### 41. Another KE4ZV Gem

From: Steve Stroh <strohs@halcyon.com>  
Date: Mon, 9 Jun 1997 22:30:48 -0700 (PDT)  
To: TAPR Networking SIG Mailing List <netsig@tapr.org>  
Message-ID: <Pine.ULT.3.96.970609222634.22570H-100000@chinook.halcyon.com>

Rendered body type: text/plain

I'm a fan of KE4EZ's prolific postings on the Usenet newsgroup  
rec.radio.amateur.digital.misc.

In this post, he goes into some detail with some really good reasons why  
it just wouldn't work... even if we tried REAL hard, to use exclusively  
Amateur Radio methods to connect regional areas.

Steve N8GNJ  
NetSIG Coordinator

--

Steve Stroh Woodinville, Washington, USA [steve@strohpub.com](mailto:steve@strohpub.com)  
Please use the Reply-To: address- I'm phasing out my Halcyon account.

----- Forwarded message -----

Date: Sun, 08 Jun 1997 15:33:52 GMT  
From: Gary Coffman <[ke4zv@bellsouth.net](mailto:ke4zv@bellsouth.net)>  
Newsgroups: rec.radio.amateur.digital.misc  
Subject: Re: When are we going to get some competent hams? (was, kickstart packet)

On Sun, 08 Jun 1997 03:27:09 GMT, [glenq@NOSPAMcyberhighway.net](mailto:glenq@NOSPAMcyberhighway.net) (Glen Quarnstrom) wrote:

>[ke4zv@bellsouth.net](mailto:ke4zv@bellsouth.net) (Gary Coffman) wrote:

>>>> No, Carl, what is required is cubic money,

>>>>

>>>> Money, money, money. Hardened sites with emergency backup are \*expensive\*

>[...]

>

>>Now figure that just to give WAN coverage to North Georgia we needed about \$120,000.

>>But the GRAPES annual capital budget is on the order of \$12,000, so it has taken us about

>>10 years just to get where we are. To cover the US, figure about \$12 million minimum, and

>>that doesn't count site rental fees (those can be brutal) or other recurring costs. Nor does

>>it allow for upgrades or maintenance. Double those numbers for a network hardened to

>>tolerate typical emergency preparedness requirements.

>

>How much money, total, do you think is spent on DXing and Contesting

>every year? Throw in EME, just for fun. I have no idea, but I bet

>it's more than \$12 mil. How much gets spent on JUST 2 meters,

>including repeaters? I don't see money as the problem, I see

>\*collecting and administering\* that money as the problem.

Well, if we could assess \$20 a head from every US amateur, we'd have our  
capital equipment money. But we'd still need money for site rental and  
other recurring costs, including the cost of communicating with, and  
collecting from, all those amateurs. I should also note that the capital  
equipment expenditure isn't the largest budget item GRAPES has had in the  
last ten years. It takes more than hardware to maintain an organization  
and a network.

And we can't use as a measure how much Dxers spend \*on their own  
stations\*, or how much any other interest in amateur radio spends \*on  
their own stations\*, to figure how much we can expect to be able to  
squeeze out of them to fund \*someone else's station\*, and that's what the  
net sites are of course. Networking is unique in amateur radio in  
absolutely having to be a widespread \*cooperative\* activity. Even  
repeater groups don't expect to have to fund repeaters two states over,  
but a national packet WAN would require just that many times over.

A better measure would be how much Dxers have contributed to funding  
Dxpeditions. And that's lots less than needed. You're right that it is a  
political problem at heart, but it is IMHO an insurmountable political  
problem. We can get packeteers to cooperate enough in a local area to  
support LANs and MANs, but supporting a national WAN is a different  
matter. AMSAT is our best example of an organization drawing national (and  
international) support for a cooperative project. And they have been very  
hard pressed to attract the support needed to fund satellites costing \*one  
tenth\* what a \*minimum\* national WAN would cost.

>>We \*do\* that. GRAPES \*is\* our state networking association. But there's a practical limit

>>to how much we can bleed out of our users. More importantly, there's a limit to how much

>>\*time\* we can require from our network maintenance people in order to install the network

>>and keep it functioning. TAPR is right, building and maintaining a viable national WAN is

>>beyond our reach. We need to concentrate our limited resources on the local LAN and

>

>No it isn't. It's politically impossible, but that's a different

>argument than saying we don't have the money, technology, bandwidth,

>or manpower to do it.

Well, it is politically impossible \*too\*, but money, technology,



bandwidth, and manpower also set strong limits on what we can accomplish. For example, the \$12 million figure above would be a mighty *\*thin\** and fragile network indeed with only single strand 56k trunks interconnecting MANs. Latencies at any real distance would be killer, and we'd quickly suffer congestive collapse just as the old 145.01 MHz backbones did.

We might be able to build such a thin WAN with an all out effort. But if we want to supply a *\*real\** national network, capable of supporting on an inter-LAN basis the kinds of applications we are now becoming able to support intra-LAN, we'd need the kind of budget AT&T, MCI, Sprint, etc has, IE *\*billions\** of dollars. That's obviously beyond our reach.

And while we probably could develop and adapt wireless technologies to handle the volume, we'd be hard pressed to find the bandwidth to carry it without going to site spacings which would balloon our recurring site costs out of reason, IE the upper microwave bands, requiring sites to be within each other's LOS radio horizon. That would be a typical spacing of less than 30 miles between sites in any direction. For a national grid, that works out to a huge number of sites. And that would also need switching, routing, and management systems well beyond our capabilities to fund, operate, and maintain.

And there's another factor. To maintain acceptable latency, we want every node to be no more than about 8 hops from any other node in the network. Less if we can manage it. Now the big boys do that via *\*bypass trunks\**, IE the network uses a redundant connection scheme where sites distant in the network topology from each other have direct links rather than having to step through all the intervening links of the network.

For example, from Atlanta to LA they don't pump data hoppity hop through every Podunk node in between. They have direct trunks which bypass all that. The network routing and management system has to be intelligent enough to find least cost (in terms of hops) routes for every pair of stations in the network. That's a *\*very\** complex job. For example, it might be cheaper, IE less latency, to route packets intended for Tempe via LA rather than hoppity hop through Podunk from Atlanta. Shortest distance isn't always (in fact seldom is) the lowest cost route. And that can change packet by packet. One packet might go via LA and the next via Dallas depending on the dynamic network loading of the moment.

But manpower is our biggest problem. There are fewer amateurs in the US than there are employees of AT&T, MCI, and Sprint. And those amateurs have their own full time jobs, so they can't give much time to the network, even if every one of them were technically competent to do so. And the reality is that there is only a tiny subset of amateurs who are both competent and willing to install and maintain a national WAN.

What all this means is that if we pushed every limit (well beyond reason), we'd still not have the WAN we can get for \$19.95 a month from the wireline providers. That's reality. Now that doesn't mean we should just scrap packet radio and all get on the telephone as Charles and Hank claim. We can *\*beat\** the local loop using *\*amateur radio\** methods. That's within our grasp. We can do high performance LANs and MANs. We can beat 33.6 kb dialup. But we can't hope to play at the national level except in very limited ways if we don't make use of the wireline networks for interties between our wireless MANs.

Now we probably could do a very *\*thin\** WAN strictly on amateur radio if we tried. (Note I'm talking about a *\*real packet switched WAN\**, not what the BBS message forwarders are doing, which isn't really packet radio at all. It is just BBSing which happens to use radio modems instead of telephone modems.) Such a thin WAN couldn't meet most of our national inter-MAN needs, which are expanding rapidly as we improve our LANs and MANs, but it could meet some.

It would be interesting to do (in fact I've been doing HF experiments along those lines because I find it interesting), and it could provide a useful limited alternative routing to bypass the wirelines in emergencies or when they're suffering congestive loading due to non-amateur traffic along some routes. I think that's worth pursuing, but our priority for now should be our LANs and MANs. Efforts spent there can give us the most bang for our amateur radio packet networking buck.

Note that as expected, every amateur will go their own way. No one can dictate what packet radio and packet networks are going to look like (TAPR can't, and neither can Charles or Hank). Each amateur will do what he thinks is useful or interesting. I've expounded many times on what I think our packet networks should, and very possibly will, look like if we want to take maximum advantage of packet technology to deliver services to

packet radio users. It's the direction I've been working toward for a long time now, and it is the direction I'll support others in working toward. People with different visions are free to work in different directions, of course, but unless they convince me that their vision is more interesting and more useful than the one I'm following, I won't change course.

Gary  
Gary Coffman KE4ZV | You Make It | Email:  
Destructive Testing Systems | We Break It | ke4zv@bellsouth.net  
534 Shannon Way | Guaranteed | or  
Lawrenceville, GA 30244 | ke4zv@radio.org

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## 42. Additional Reply comments Docket 97-12

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>  
Date: Tue, 10 Jun 1997 05:10:58 -0500  
To: " Spread Spectrum "<ss@tapr.org>, "TAPR Spread Sprctrum" <ss-sta@tapr.org>, "NETSIG list mailing"<netsig@tapr.org>  
Message-ID: <v0302096cafc2d66263b2@[192.168.1.2]>  
Rendered body type: text/plain

This is now the current list of reply comments to Docket 97-12. regarding Amendment of the Amateur Service Rules to Provide For Greater Use of Spread Spectrum Communication Technologies:

Tucson Amateur Packet Radio Corp 6/5/97  
ARRL 6/5/97  
Lyle Johnson, WA7GXD 6/5/97  
Glenn Elmore, N6GN 6/5/97  
Robert Buaas, K6KGS 6/5/97  
John Ackermann, AG9V 6/5/97  
Steve Dimse, K4HG 6/5/97  
Tom McDermott, N5EG 6/5/97  
John R Bingham, W7WKR 6/5/97  
John Koster, W9DDD 6/5/97  
Anthony McConnell, N3JLI and Jacob Brodsky, AB3A 6/5/97  
James Barron, Jr, KA5WSS 6/5/97  
Robert J. Carpenter 6/5/97  
Steven K. Stroh, N8GNJ 6/5/97  
THE W5YI GROUP 6/5/97  
AMSAT 6/5/97  
Central States VHF Society 6/5/97  
Bill Tynan, W3XO 6/5/97

<http://www.tapr.org/ss> use the link regarding rule making.

There are maybe just a few additional comments to complete the record. Thanks to all those that have sent electronic copies of their filings. I believe it helps everyone to see what positions are being taken and discussed regarding this important rule making process.

Cheers - Greg, WD5IVD

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Greg Jones, WD5IVD  
Austin, Texas  
wd5ivd@tapr.org  
<http://www.tapr.org/~wd5ivd>  
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## 43. Re: [NETSIG:3267] Another KE4ZV Gem

From: Chuck Hast <wchast@utilpart.com>  
Date: Tue, 10 Jun 1997 10:45:58 -0400  
To: netsig@tapr.org  
Message-ID: <339D68A6.F9290731@utilpart.com>  
Rendered body type: text/plain

Steve Stroh wrote:

> I'm a fan of KE4EZ's prolific postings on the Usenet newsgroup  
> rec.radio.amateur.digital.misc.  
>  
> In this post, he goes into some detail with some really good reasons  
> why  
> it just wouldn't work... even if we tried REAL hard, to use  
> exclusively  
> Amateur Radio methods to connect regional areas.  
>

This is why I continue to support AMSAT, I feel that if we are going to do ANTHINGlike this over RF, the birds are the answer to it. Yes we are relying on some additional hardware, and it is another piece that can fail, but all given these things have been pretty reliable.

Yes a terrestrial WAN will be a big cost and I agree with the given numbers, but I also see it as a mountain, why climb it??? because ITS THERE. That is the sort of challenge this is what makes amateur radio fun.

I also agree that the wire line links should be used to interconnect our LAN's though a part of me rebels against it, as not being "RF", I have to push him down in his box and say "shut up!" because a wire line interconnect is better than NO interconnect.

I have seen amateurs do with very little in monetary terms and yet build a network that was hardened to the point of going thru a earthquake of level Riechter 7.4 and being one of only two networks operational in the country (Costa Rica April 1991 -- Limon Area Quake 7.4 R.--) The critical site was probably only about 30 miles distant from the epicenter, the devices used to protect the site from such shaking were a lot of angle iron, some bits and pieces of rubber tire good screws nuts and bolts and willing people to mount it all at the mountain top site. The Costarrican network survived the shake, and was used as primary network in the first few days after the quake, and even after that, I was sent out into the affected zone to set up packet stations for handling triage traffic back into the capital city hospitals. The network was small consisting of only 5 ROSE switches --- in a small country it does not take much.--- but we were able to CONSTRUCT a hardened network using common materials and common sense, something that appeared lacking in many commercial installations which suffered heavy damage because someone did not take into account inertial effects of swinging bits and pieces.

I believe that we can do anything we set our selves to do, I have found that to be true in many endeavours, but we have to be willing to try, yes you are going to slide down the mountain a few times, some will even fall off, but you still have to keep at it, sooner or later you can get there. Terrestrial links,satellite links, wire line links, they all will play a part in the interlinking of our LANs, turn not your nose up at any of them, but at the same time, if we can replace a wire link with a RF link make it so, but KEEP the wire link as a backup... Burn no bridges...

I have observed the thread on the usage of antennas, I have used commercial grade yagies at all of my sites, but then all of my sites have been in tropical areas or near so, there for I can not discuss the effects of ice... I do know what salt and sulfpher gas will do to aluminum antennas, having had sites at the coast and on top of active volcanos, the later will eat aluminum quite rapidly, so each place has it's advantages and disadvantages... We just got used to replacing volcano sites antennas every two years, that is it.

Have fun, keep building and look up.

--  
Chuck Hast  
wchast@utilpart.com

kp4djt

---

#### 44. Re: [NETSIG:3267] Another KE4ZV Gem

From: Bob Nielsen <nielsen@primenet.com>  
Date: Tue, 10 Jun 1997 08:56:50 -0700 (MST)  
To: netsig@tapr.org  
Message-ID: <Pine.LNX.3.96.970610085503.2844E-100000@nielsen.tus.primenet.com>  
Rendered body type: text/plain

Yes, Gary's posts are usually quite informative and on-target.

I haven't seen anything on either tcp-group or the gateways list for some time. Did Charles get them both shut down?

Bob

-----  
Bob Nielsen                                   Internet: nielsen@primenet.com  
Tucson, AZ                                   AMPRnet: w6swe@w6swe.ampr.org  
                                            AX.25: w6swe@wb7tls.az.usa.noam  
                                            http://www.primenet.com/~nielsen

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#### 45. Re: [NETSIG:3270] Re: Another KE4ZV Gem

From: Steve Stroh <strohs@halcyon.com>  
Date: Tue, 10 Jun 1997 10:59:03 -0700 (PDT)  
To: netsig@tapr.org  
Message-ID: <Pine.ULT.3.96.970610105118.8932A-100000@coho.halcyon.com>  
Rendered body type: text/plain

On Tue, 10 Jun 1997, Bob Nielsen wrote:

> Yes, Gary's posts are usually quite informative and on-target.  
>  
> I haven't seen anything on either tcp-group or the gateways list for some  
> time. Did Charles get them both shut down?

I've read various things about the gateways list not being healthy.  
Perhaps TAPR should offer to host one.

I've also read hints that Brian shut down tcp-group after Charles most recent rantings. It surprised me that Brian didn't post an "it's gone" message. I wonder if he isn't hacking on something and intends to restart it (pure speculation on my part). It's been suggested to nudge NetSIG into more of a TCP/IP Users list (which wouldn't really compete with tcp-group's mission of serving Amateur TCP/IP developers).

Steve

--  
Steve Stroh   Woodinville, Washington, USA   steve@strohpub.com  
Please use the Reply-To: address- I'm phasing out my Halcyon account.

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#### 46. Re: [NETSIG:3271] Re: Another KE4ZV Gem

From: Bob Nielsen <nielsen@primenet.com>  
Date: Tue, 10 Jun 1997 16:52:10 -0700 (MST)  
To: netsig@tapr.org  
Message-ID: <Pine.LNX.3.96.970610165057.3174A-100000@nielsen.tus.primenet.com>  
Rendered body type: text/plain

On Tue, 10 Jun 1997, Steve Stroh wrote:

> > I haven't seen anything on either tcp-group or the gateways list for some  
> > time. Did Charles get them both shut down?  
>  
> I've read various things about the gateways list not being healthy.  
> Perhaps TAPR should offer to host one.

What--and make Charles' claims come true :-)

-----  
Bob Nielsen                                   Internet: nielsen@primenet.com  
Tucson, AZ                                   AMPRnet: w6swe@w6swe.ampr.org  
                                            AX.25: w6swe@wb7tls.az.usa.noam  
                                            http://www.primenet.com/~nielsen

## 47. Re: [NETSIG:3272] Re: Another KE4ZV Gem

From: Steve Stroh <strohs@halcyon.com>  
Date: Tue, 10 Jun 1997 21:11:43 -0700 (PDT)  
To: netsig@tapr.org  
Message-ID: <Pine.ULT.3.96.970610211106.29841A-100000@chinook.halcyon.com>  
Rendered body type: text/plain

On Tue, 10 Jun 1997, Bob Nielsen wrote:

> On Tue, 10 Jun 1997, Steve Stroh wrote:  
>  
> > I haven't seen anything on either tcp-group or the gateways list for some  
> > time. Did Charles get them both shut down?  
> >  
> > I've read various things about the gateways list not being healthy.  
> > Perhaps TAPR should offer to host one.  
>  
> What--and make Charles' claims come true :-)

:-) Nice try. Host a \_list\_, not a gateway (yet).

Steve

--

Steve Stroh Woodinville, Washington, USA steve@strohpublish.com  
Please use the Reply-To: address- I'm phasing out my Halcyon account.

---

## 48. Re Hi speed links

From: "(SV2AGW) George Rossopoylos" <sv2agw@the.forthnet.gr>  
Date: Wed, 11 Jun 1997 13:04:59 +0300  
To: <netsig@tapr.org>  
Message-ID: <199706111008.NAA11962@nefeli.forthnet.gr>  
Rendered body type: text/plain

In the discussion of "Another KE4ZV Gem" you mentioned telephone wires. I would like to say the follow.  
Pse dont start again if wire should be used for Ham or not we all know that half of us say yes and the others No there is no need to start all over again.

Our telephone company (OTE) the only one in Greece use wires to connect Greek cities only as a backup for its rf links. Cant we do the same?? A friend of mine and good Radio Amateur (SV2AHM) works in these links and we have discussed it. Telephone companies uses rf links where it is possible. After all if someone call me from USA his voice will pass through a lot of sattelites. And i think that most of the distance from USA to Greece will be done with rf links. We found the internet as a cheap(?) and easy solution for our problems. We must try to use rf links where it is possible just because we are Radio Amateurs and we love RF. We are not telephone companies and we dont have to establish a link just to earn more money. We do this just for the fun and for the experience (right word??).

Also this message reach you via Internet but travells mostly through rf links.

73s to all from Greece

George Rossopoulos  
e-mail:sv2agw@the.forthnet.gr  
packet:SV2AGW@SV2DXC.TSL.GRC.EU  
<http://www.forthnet.gr/sv2agw/>  
<http://www.intranet.gr/isefi/rossopou/rossopou.htm>

---

## 49. Re: [NETSIG:3274] Re Hi speed links

From: Steve Stroh <strohs@halcyon.com>  
Date: Wed, 11 Jun 1997 07:09:29 -0700 (PDT)  
To: TAPR Networking SIG Mailing List <netsig@tapr.org>  
Message-ID: <Pine.ULT.3.96.970611070150.13469C-100000@chinook.halcyon.com>  
Rendered body type: text/plain

On Wed, 11 Jun 1997, (SV2AGW) George Rossopoylos wrote:

> In the discussion of "Another KE4ZV Gem" you mentioned telephone wires. I  
> would like to say the follow.  
> Pse dont start again if wire should be used for Ham or not we all know that  
> half of us say yes and the others No there is no need to start all over  
> again.

The prevailing opinion (that I've observed) is that wireline links,

including the Internet, is the lesser of the two evils of "It isn't Amateur RADIO" and "It simply isn't cost effective for Amateurs to do this with RF".

> Our telephone company (OTE) the only one in Greece use wires to connect  
> Greek cities only as a backup for its rf links. Cant we do the same??

When it is indeed possible to do the job AT ALL with RF links, agreed!

> A  
> friend of mine and good Radio Amateur (SV2AHM) works in these links and we  
> have discussed it. Telephone companies uses rf links where it is possible.

In the US, it's probably more common now to use wirelines rather than RF because of the very high capacity of fiber optic cable. Also, microwave spectrum is being claimed for uses other than fixed relay.

> After all if someone call me from USA his voice will pass through a lot of  
> sattelites.

Perhaps one satellite, but not many, or the delay would be excessively annoying (remember that it's a 44,600 mile round trip to each geosynchronous satellite). More likely that your voice travels on submarine fiber cable now.

> And i think that most of the distance from USA to Greece will  
> be done with rf links. We found the internet as a cheap(?) and easy  
> solution for our problems. We must try to use rf links where it is possible  
> just because we are Radio Amateurs and we love RF. We are not telephone  
> companies and we dont have to establish a link just to earn more money. We  
> do this just for the fun and for the experience (right word??).

>  
> Also this message reach you via Internet but travells mostly through rf  
> links.

>  
> 73s to all from Greece

>  
> George Rossopoulos  
> e-mail:sv2agw@the.forthet.gr  
> packet:SV2AGW@SV2DXC.TSL.GRC.EU  
> http://www.forthnet.gr/sv2agw/  
> http://www.intranet.gr/isefi/rossopou/rossopou.htm

Thanks for your comments!

Steve N8GNJ  
NetSIG Coordinator

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Steve Stroh Woodinville, Washington, USA [steve@strohpublish.com](mailto:steve@strohpublish.com)  
Please use the Reply-To: address- I'm phasing out my Halcyon account.

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## 50. Re: [NETSIG:3275] Re: Re Hi speed links

From: Mike Curtis <[wd6ehr@kaiwan.com](mailto:wd6ehr@kaiwan.com)>  
Date: Wed, 11 Jun 1997 12:25:16 -0700 (PDT)  
To: [netsig@tapr.org](mailto:netsig@tapr.org)  
Message-ID: <[Pine.SUN.3.95.970611120247.14688F-100000@kaiwan009.kaiwan.com](mailto:Pine.SUN.3.95.970611120247.14688F-100000@kaiwan009.kaiwan.com)>  
Rendered body type: text/plain

On Wed, 11 Jun 1997, Steve Stroh wrote:

>  
> On Wed, 11 Jun 1997, (SV2AGW) George Rossopoylos wrote:

<Most telephone goes via RF links>

This isn't the issue.

Amateur radio should provide an ALTERNATIVE to other services. In an emergency, the telephone may not be accessible, frequently because the telephone company 1. is overloaded, and 2. PURPOSELY removes dial tones for use by government and other priority customers.

> > Our telephone company (OTE) the only one in Greece use wires to connect  
> > Greek cities only as a backup for its rf links. Cant we do the same??  
>  
> When it is indeed possible to do the job AT ALL with RF links, agreed!

It is grossly unfair to compare the very wealthy telephone companies with the amateur community. When they need more gear, they raise prices to cover it. Also, there are FAR more telephone subscribers than amateurs. It's like comparing the oil-rich, extremely wealthy country of Kuwait to a single beggar and asking why the beggar doesn't just buy the things he needs instead of begging for them.

> > A  
> > friend of mine and good Radio Amateur (SV2AHM) works in these links and we  
> > have discussed it. Telephone companies uses rf links where it is possible.  
>  
> In the US, it's probably more common now to use wirelines rather than RF  
> because of the very high capacity of fiber optic cable. Also, microwave  
> spectrum is being claimed for uses other than fixed relay.

Quite true. RF is a finite resource. Fiberoptic cable is probably as close to an infinite resource as we will get.

> > After all if someone call me from USA his voice will pass through a lot of  
> > satellites.  
>  
> Perhaps one satellite, but not many, or the delay would be excessively  
> annoying (remember that it's a 44,600 mile round trip to each  
> geosynchronous satellite). More likely that your voice travels on  
> submarine fiber cable now.

When the satellites were first used for teelephone communication, the side tone at the far end (which allows the one speaking to hear him/herself) caused a portion of the signal to be reflected back to thee originator. This caused a VERY discernable - and troubling - echo. They've gotten rid of this by eliminating the echoing portion of the side tone, but even today, when speaking via a SINGLE satellite link, the delay causes the conversation to have a VERY unnatural "rhythm". The one to whom you speak takes just a little too long to respond, making them sound kind of "retarded". Also, you tend to talk over one another because of the delay.

My take on this is that we should try to handle as much as possible and/or reasonable via amateur radio, especially traffic, which IMHO should be handled EXCLUSIVELY by amateur radio links. Bulletins, to my thinking usually trivially unimportant (and a big waste of resources in most cases) could be handled by any means whatsoever.

My reasoning behind this is quite simple - if an amateur only network is not in place, should major disasters hit and we lose the use of telephone lines, we will have no "backup". When the disaster hits is NOT the time to start - we NEED to have it in place, established, tested, and fully functional, BEFORE the disaster hits.

So my opinion is that we should use BOTH amateur RF links and any other means we want.

-- mike

---

## 51. Wireless Communications

From: "John Dundas" <J.M.Dundas@btinternet.com>  
Date: Thu, 12 Jun 1997 07:04:45 +0100  
To: <netsig@tapr.org>  
Message-ID: <199706120702.IAA20653@snow.btinternet.com>  
Rendered body type: text/plain

Hello One and all,

I enjoy working on our group's node network which is all RF. The reasons:

1. I enjoy construction
2. I like to go out and suvery areas for possible new user access nodes or link sites.
3. I like to site down and try and see if I can get RF from site A to site D via whatever other RF nodes I have to put on.
4. It is after all a hobby and not a professional network.

The amount of systems which are now linking into the Internet and providing a service is growing each day, is this really what we want?

In Scotland we have had to put nodes on to cover links over 80km and have managed to do this on 70cm with no problems, we are in the process of upgrading the network to 430/439Mhz at 9600 bauds, as we all know this does take time, effort and money, but thats the fun of it, once we start

forgetting about what hobby we are in then you might as well pack up and go home.

The idea of connecting the amateur network into the Internet via 1200 or 9600 baud access ports for users is totally insane, I have seen what sort of problems you can have with a dozen users all trying to use one 1200 baud link to talk to some VK/VE stations via Internet, whats wrong with using you amateur radio for this purposes?

There is an old saying IF YOU DONT USE IT YOU WILL LOOSE IT! So if we keep on going down the road of WE DONT NEED RF BECAUSE WE USE WIRELINKS then are we not cutting our own throats by inviting people to come and take our much guarded spectrum away from us?

rgds

John Dundas

J.M.Dundas@btinternet.com

Key Radio Systems (Scotland) Ltd      Homepages

<http://www.btiinternet.com/~keyradio.scot/>

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## 52. Re: [NETSIG:3277] Wireless Communications

From: Steve Stroh <strohs@halcyon.com>  
Date: Thu, 12 Jun 1997 01:08:36 -0700 (PDT)  
To: netsig@tapr.org  
Message-ID: <Pine.ULT.3.96.970612010033.15531E-100000@chinook.halcyon.com>  
Rendered body type: text/plain

On Thu, 12 Jun 1997, John Dundas wrote:

> The amount of systems which are now linking into the Internet and providing  
> a service is growing each day, is this really what we want?

Hi John:

Thanks for your comments. There is a certain amount of "danger" that in using the Internet for linking, Amateur Radio will fade out as the primary motivator. That's not the case for me, and I'd guess for many others.

1. There's no great mystery or excitement about dialing up to an Internet connection via a modem. It works reliably, and it's there when I need it for routine communications.

2. Radio is fun. I like goofing around with radio, especially digital communications. When I interconnect Amateur Radio to the Internet, it's typically used for "tunneling" between Amateur sites that just can't connect via RF. There's an active TCP/IP group in Colorado, another in Atlanta, another in Ottawa, etc. Those are clearly out of any reasonable reach of RF communications (discounting HF of course). So we use wirelines. But it's RF on THEIR end, and it's RF on MY end- it's just the middle that isn't RF... and that's OK.

3. Amateur Radio "content" is pretty boring, for the most part. I mean, once you've explored another ham's system, you've pretty much seen all there is to see. The Internet offers endless variety- that's the "content" that justifies my "trying to do it with radio".

Steve N8GNJ  
NetSIG Coordinator

--

Steve Stroh Woodinville, Washington, USA [steve@strohpub.com](mailto:steve@strohpub.com)  
Please use the Reply-To: address- I'm phasing out my Halcyon account.

---

## 53. Re: [NETSIG:3278] Re: Wireless Communications

From: "Thomas A. Moulton" <w2vy@gte.net>  
Date: Thu, 12 Jun 1997 07:58:53 -0400  
To: netsig@tapr.org  
Message-ID: <339FE47B.9A36D54@gte.net>  
Rendered body type: text/plain

The question of wireless access to the Internet is one we keep coming back to all the time.



The biggest thing we have to come to grips with is that we are not trying to replace one with the other, but to enhance our FUN. (That's what it's all about)

We need to look at some of the things the internet can provide us to enhance  
Amateur Radio.

Anyone ever use IRC (or the like) to distribute Bulletins?  
Hams usually being nuts about the current (CORRECT) time,  
anyone access the time standards via the internet?

There is so much out there that we can Utilize and avoid the regulations  
about content, etc...

Food for thought...

-----  
Thomas A. Moulton, W2VY  
ROSE X.25 Packet Switch <http://www.rats.org/rose>  
Need Cosmetics? <http://home1.gte.net/w2vy/marykay.htm>

---

#### 54. Re: [NETSIG:3279] Re: Wireless Communications

From: mcduffie@prairieweb.com (Gary McDuffie, Sr.)  
Date: Thu, 12 Jun 1997 14:12:05 GMT  
To: netsig@tapr.org  
Message-ID: <33a000c4.23105299@204.248.168.1>  
Rendered body type: text/plain

On Thu, 12 Jun 1997 07:02:09 -0500 (CDT), you said:

> The question of wireless access to the Internet is one we keep coming  
> back to all the time.

> Food for thought...

Tasted like Brussels sprouts to me, Tom. :)

Sorry, I don't buy it. I especially don't agree with the guy before you that said because there was rf on each end of it, that made it alright. No way. The telephone or internet linking of two rf networks to get somewhere because there isn't an rf link in place is never going to motivate people to build a link. In an emergency, I would agree that anything goes, and the use of whatever means possible is called for. But for day to day use, it just isn't amateur radio unless it is radio all the way.

Gary

---

#### 55. Re: [NETSIG:3280] Re: Wireless Communications

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>  
Date: Thu, 12 Jun 1997 10:20:24 -0500  
To: netsig@tapr.org  
Message-ID: <v03020903afc5c192ecec@[206.133.151.107]>  
Rendered body type: text/plain

Hi Gary.

I might agree on 1 link inbetween to places that RF is possible to do --  
but what if it is 5-10 links with little or no support in between ?

As I just posted on USENET to one of Charle's postings. How does let's say TexNet, get from Dallas to Lubbock, when there is little or no interest or population between the 400-500 miles of RF required ? We have enough real live problems maintaining nodes that people have to drive two or more hours to support.

There are times when wireline connections are pragmatic approaches in order to make the connection between groups that would never be possible other ways and allow RF to spread from those locations around a critical mass of activity. Now, if we could somehow make our systems so that every repeater group in the US would want to be a part of it then in at least Texas we could have a site every 30 miles or so.

Now, in highly populated areas, sometime distance is not the issue. Sometime, you could never get the necessary site to make the links work. What I am seeing happening now is as more and more commerical wireless companies purchase site locations for big \$\$\$\$ , buildings are even more reluctant to let a bunch of amateur radio operators have access to their

building. The days of just explaining what you do and how it benefits folks are quickly fading in many parts of the US, if not totally gone. If you haven't tried recently, I have. The other issue I am seeing is the local city ordinances in many places that even require the amateur antennas on a building to be masked in some manner -- the cost can make a node not practical to build.

Anyway, as many of you know on this list, it sometime takes months to years to acquire a site location and finally get equipment on it. Many amateurs do fall into the I'll just use the Internet instead, since it is a lot easier to do. The problem then becomes, they don't have any sites to put up RF to go someplace else. While a wireline connection can correct a long-haul issue to someplace else, a group shouldn't stop there -- at least in my thoughts -- they need to take the logical step and find the site to do the RF from. Although whatever a local group decides to do is their choice. All I can do is explain and describe alternate ways of doing things.

I think we have to be open minded about what people want to do in amateur radio. What is possible in your area of the US, probably is much different from someone else a few hundred miles away let alone on the other side of the US from you.

I just hope we can have more logical debates on here like the current one happening.

Cheers - Greg

```
>On Thu, 12 Jun 1997 07:02:09 -0500 (CDT), you said:
>
>> The question of wireless access to the Internet is one we keep coming
>> back to all the time.
>
>> Food for thought...
>
>Tasted like Brussels sprouts to me, Tom. :)
>
>Sorry, I don't buy it. I especially don't agree with the guy before you
>that said because there was rf on each end of it, that made it alright. No
>way. The telephone or internet linking of two rf networks to get somewhere
>because there isn't an rf link in place is never going to motivate people
>to build a link. In an emergency, I would agree that anything goes, and
>the use of whatever means possible is called for. But for day to day use,
>it just isn't amateur radio unless it is radio all the way.
>
>Gary
```

```
-----
Greg Jones, WD5IVD
Austin, Texas
wd5ivd@tapr.org
http://www.tapr.org/~wd5ivd
-----
```

---

## 56. Re: [NETSIG:3280] Re: Wireless Communications

```
From: Bob Meyer <ko6ri@ko6ri.ampr.org>
Date: Thu, 12 Jun 1997 08:47:46 -0700
To: netsig@tapr.org
Message-ID: <33A01A22.9A4@ko6ri.ampr.org>
Rendered body type: text/plain
```

Gary McDuffie, Sr. wrote:

```
>
> On Thu, 12 Jun 1997 07:02:09 -0500 (CDT), you said:
>
> > The question of wireless access to the Internet is one we keep coming
> > back to all the time.
>
> > Food for thought...
>
> Tasted like Brussels sprouts to me, Tom. :)
>
> Sorry, I don't buy it. I especially don't agree with the guy before you
> that said because there was rf on each end of it, that made it alright. No
> way. The telephone or internet linking of two rf networks to get somewhere
> because there isn't an rf link in place is never going to motivate people
> to build a link. In an emergency, I would agree that anything goes, and
> the use of whatever means possible is called for. But for day to day use,
```

> it just isn't amateur radio unless it is radio all the way.  
>

Can we drop this.... I get so tired of reading complaints from folks that don't understand the difference between extending the internet using amateur radio and extending amateur radio using the internet.

--  
Later....  
Bob

---

## 57. Re: [NETSIG:3280] Re: Wireless Communications

From: "Terry A. Cox" <tacox@fedex.com>  
Date: Thu, 12 Jun 1997 11:39:07 -0500  
To: netsig@tapr.org  
Message-ID: <199706121645.AA09737@gateway.fedex.com>  
Rendered body type: text/plain

At 09:20 AM 6/12/97 -0500, you wrote:

>> Food for thought...  
>  
>Tasted like Brussels sprouts to me, Tom. :)  
>  
>Sorry, I don't buy it..... But for day to day use,  
>it just isn't amateur radio unless it is radio all the way.  
>  
>Gary

I have to agree with you, Gary. The internet is great and I use it extensively, but not for everyday amateur radio applications. I feel as long as the internet "crutch" is there, no amateur RF solution will be developed, and as has been pointed out, when the big disaster occurs and the internet goes away, we'll be in the same communication boat with everybody else. I guess I also have doubts that ham communications must mirror internet style communications. Sure, we want our RF paths to be as robust as is reasonable and affordable, but a lot of communications can be handled by networks we can be reasonably expected to build and maintain. Especially if they have the ability to be hardened for those disaster situations we all (hopefully) prepare for.

That's my two cents worth. 73,  
Terry A. Cox, Chief Engineer, Data Network Engineering  
Mail Addr: PO Box 727, MD 2811, Memphis, TN 38194-2811  
Phys Addr: 2828 Business Park Dr., Memphis, TN 38118  
Work Numbers Voice:(901) 375-6690 FAX: (901) 375-6009

EMC2: COX/TERRY E-Mail: tacox@fedex.com  
Ham BBS: KB4KA @W4BS.#WESTN.TN.USA.NOAM  
ROSE PBBS: KB4KA-10 V K4VVM-3,901372/145.67 (1200)  
DXCluster: KB4KA @KB4KA on 144.97 direct or via Southeast  
PacketCluster Network

---

## 58. Bulletins and such.

From: "Rod Fowler (afa1nc)" <k2adj@mosquito.com>  
Date: Thu, 12 Jun 1997 15:00:12 -0400  
To: netsig@tapr.org  
Message-ID: <2.2.16.19970612190012.24ef6da0@mosquito.com>  
Rendered body type: text/plain

[Empty message body]

---

## 59. Re: [NETSIG:3280] Re: Wireless Communications

From: Chuck Hast <wchast@utilpart.com>  
Date: Thu, 12 Jun 1997 14:51:07 -0400  
To: netsig@tapr.org  
Message-ID: <33A0451B.6597E759@utilpart.com>  
Rendered body type: text/plain

Gary McDuffie, Sr. wrote:

> Tasted like Brussels sprouts to me, Tom. :)  
>  
> Sorry, I don't buy it. I especially don't agree with the guy before  
> you  
> that said because there was rf on each end of it, that made it  
> alright. No  
> way. The telephone or internet linking of two rf networks to get

> somewhere  
> because there isn't an rf link in place is never going to motivate  
> people  
> to build a link. In an emergency, I would agree that anything goes,  
> and  
> the use of whatever means possible is called for. But for day to day  
> use,  
> it just isn't amateur radio unless it is radio all the way.  
>

Gary:

I lived in a small country -- Costa Rica -- where we covered 75% of the country with 5 ROSE switches. We had them placed on top of mountains that were in most cases well above 3000m in altitude. Distances were 60-120km from site to site, and there were probably 250km from end to end.

We did the whole thing with RF no problem. That is quite easy to do in a small country particularly one where the equivalent to FEMA supplied a vehicle to go up to do service to these sites, the packet radio network in this case formed part of the national emergency communications network, and we had at our disposition a driver and SUV to take us to any of the sites if they failed. We were able to get our network switches on any tower we wanted, and the government would give us radios to build up the bits and pieces that we could not fund from our digital group.

In this country it is totally different, in most cases the local government is indifferent to us, the distances are measured in not 10's or even 100's of km but at times 1k's of km between places where there are switch/node sites.

As a example, we have taken years to get a functional link across the mid section of the state of Florida, there were some high NetRom sites but they were always slow and timed out, and the guys that ran them had the idea that you put sticks up on ONE freq. and that was your network...

Now we have just completed the first reliable link across the state using ROSE, there are a couple of "flaky" hops due to a digi, but we at least have a stake in the ground with the digi, soon to be replaced with a switch, the point being that it has taken us YEARS to get to this point, mostly because of the fact that the people who do this sort of thing can be counted on two hands with fingers left over.

Now you get out in TX or up in the plains states where the distances ARE measured in high 100's of km between sites and you will begin to understand the plight of the network in these areas..

Now looking back on FL, the wire line links have been there, but that did NOT kill the desire to build the RF links, in fact it may have actually pushed it forward, people who got a taste of connecting through a wire link wanted to make it all RF, and so it got done, as I look at it, I think that we have the wire line links to thank for getting the RF path up and running.

I do not really like to go wire, but if it lets our people do communications outside of the WAN/LAN of their town/region, go for it, but make sure and keep the RF concept alive and visible, that is the mountain we are trying to climb, just because you can get up there

in a helicopter, and you may survey the summit with the chopper, but the climb is done step by step going up the flank... I think that is what the wire line part is, the helo allowing us to do the survey, the RF is the actual climb.

I monitor the links coming into Tampa, and I see users coming into the converse site at ko4ks, they come in via RF, even though they have wire line options in other parts of the state much nearer to them, they CHOOSE RF over the wire, why, probably because it is the climb, that they are interested in not just standing on the top... The helo waste there for the using but they DID NOT use it... The more I look at it the more I feel that if properly presented wire links can be used to foment the money and volunteer time to build the RF links...

I am not sure what distances you are used to dealing with but

--

Chuck Hast  
wchast@utilpart.com

kp4djt

---

## 60. Re: Wireless Communications

From: Don Lemke <wb9mjn@wb9mjn.ampr.org>  
Date: Thu, 12 Jun 1997 14:41:45 -0500  
To: netsig@tapr.org  
Message-ID: <33A050F9.BED@wb9mjn.ampr.org>  
Rendered body type: text/plain

Hi All,

While its laudable that everybody is so concerned about emergency communications, I don't think hams will build an amateur network to do a job that is primarily the governments' responsibility. We do have a duty to chip in, of course. But the primary responsibility for any emergency communications system is that of the government.

I think its pretty much clear, that if we can outdo the ISPs, that Hams will build MAN's in support of Internet access, and in doing so, end up with alot of extra on-air capability. Such as Packet TV networking, what is called "Video Teleconferencing" on the Internet. And hey, even emergency communications!

This really is how things have always been on Ham Radio. Hams do not buy HF rigs, or build FM repeaters (after the first one in an area) for primarily emergency communications. This stuff DOES get pressed into emergency service, tho, because its omnipresent. And its Omnipresence that is Ham Radio's emergency communication strength.

The biggest advantage to TCPIP, with Internet connectivity is that of the large efficiency of scale of the application layer development. Somebody wants to try something new, and exciting, just does it. They download the demo from the internet, and use it between on-air, or on-air / internet operations. We ignore being in-step with this momentum at our own peril. And Hey, it might even be useful for emergency communications!

We are given the emergency communications purpose, because we are useful to the government in emergency situations. Not because we are trying to do the governments job, for the responsible organisations in the government. We will not be useful, if we are not doing something, and that something is not omnipresent.

DDMA-WAN, that i've talked about elsewhere is an example of something that we can do, that's fun, and useful, and does not take an omnipresent organisation, to someday generate an omnipresent capability.

--

73, Don.

AMPRNet : wb9mjn@wb9mjn.ampr.org[44.72.98.19]  
Internet: wb9mjn%wb9mjn.ampr.org@uugate.aim.utah.edu

## 61. WANs, MANs, and LANs (long)

From: Marty Albert <marty@trucom.com>  
Date: Thu, 12 Jun 1997 15:57:51 -0500  
To: bbssig@tapr.org, netsig@tapr.org  
Message-ID: <1.5.4.32.19970612205751.00679cc8@mail.trucom.com>  
Rendered body type: text/plain

Hello, Folks...

Here is the discussion, as promised, about WANs, MANs, and LANs.

I have come to believe that when we talk about these entities, that not everyone has the same definitions in mind. This leads to confusion and disagreements between people because, as Grandma used to say, we are comparing apples and oranges.

What I would like to do here is see if the group(s) can come up with some definitions that we can all use while talking about these things.

I think that everyone knows that, as a rule, a LAN is smaller than a MAN which is smaller than a WAN (for you math types, "LAN < MAN < WAN"). The question is, how much smaller? (ie; is "LAN << MAN << WAN"?)

Clearly, using some arbitrary population numbers or geographic area won't work... If we say, for example, that a LAN contains 100 users, then there will be LANs that are bigger than some states! On the other hand, if we say that a LAN is made up of, say, 50 square miles, we will have some LANs with no users and some with, perhaps, several thousand! The same applies to MANs and WANs.

There are also some differences between urban, suburban, and rural areas that will need to be addressed... For example, the county where I live (Madison County, MO) has a total population of about 15,000 people. There are, at last count, only about 20 active Hams in Madison County. Of these 20 or so Hams, only about 6 are even on packet and only 3 are active. There is one "city" in Madison County (Fredericktown) with a population of about 4,000 or so. Madison county can be effectively covered by a single, well placed, 2m node, so that is not a huge problem.

Let's look at a nearby county, Reynolds... If you have a map, look up Reynolds County, MO. It is long (north to south) and skinny. If your map shows topology, you will also see many good sized hills and deep valleys. Reynolds County has a population of under 10,000 and there are about a dozen Hams. Perhaps 3 of them are active on packet. While a single "LAN" node could cover all of Madison County, this is not the case with Reynolds County... It would take probably 2, maybe 3 "LAN" nodes to do the job.

So, we could make all of Madison County one big LAN, but what about Reynolds? Should it be made one big LAN (combining the 2-3 nodes) or should it be broken into two smaller LANs? For that matter, since we are only talking about 6 or so total users, should Madison and Reynolds Counties be made into one even bigger LAN? Wouldn't that make it a MAN? If we combine the two counties, we have an area of about 2500 square miles... Wouldn't that be a WAN??

Where I am going with this is to point out that it will be very hard to use any sort of pre-determined "requirements" to decide what is a LAN, MAN, or WAN. In fact, the determination will be more one of how the smaller, "sub-network", fits into the overall network design.

Ideally, as you move from LAN to MAN to WAN, the amount of traffic should decrease. That is, there should be a lot of traffic in the LAN and only a small amount should need to "spill over" to the MAN and only a small amount of the MAN traffic should spill over to the WAN. I'm sure that some people are scratching their heads and asking why...

Again, keep in mind that I am talking ideal situations here, not always common or even possible in reality! (note that I am using a PBBS in the following discussion... Frankly, I think that the days of the BBS are numbered, but it is something that everyone should be familiar with and so I decided to use it for an example)

Services that the users in the LAN want/need should be, by and large, available at the LAN level. Using the PBBS as an example, each LAN should have its own PBBS to allow the users of that LAN to read and send bulletins, personal mail, and NTS mail. In other words, the users need not leave their LAN to do these things.

Now, obviously, the various PBBSSs in the LANs will need to communicate with each other... They do so by passing the traffic to each other on the MAN level. Again, ideally, some sort of broadcast protocol could be used so that one PBBSS in the MAN would broadcast the bulletins ONCE and all the other PBBSSs would get them. It would make sense for one of the MAN PBBSSs to be declared as the "Master" PBBSS...

Next, the various "Master" PBBSSs in the various MANs need to communicate with each other... They do so by passing the traffic to each other at the WAN level. The broadcast protocol would work here as well. (actually, there would be some latency problems, but I am ignoring them for this discussion)

As you see, we might have 1000 users that will read the same bulletin meaning that it gets sent 1000 times at the LAN level, but it would be sent only once at the MAN and WAN levels.

Sadly, due to the problems with more rural areas, we may end up with PBBSSs at the MAN level.

What all of this boils down to meaning is that the LANs must run at very high speeds. I suspect that 56K bps is about the bottom cutoff for effective use. (consider something like Web pages and browsing with all that data flow!) The MANs can be slower and the WANs slower yet since they are, ideally, carrying less traffic.

We also need to think about how to implement the LANs, MANs, and WANs...

RF offers the best possible solution for the LANs. We have the ability now to do very high speed LANs. While the DSY 56K radio modems are a bit expensive, they are available. The Slovenian systems are much cheaper but have a few problems for some countries (the US included) with bandwidth, but nothing that is not possible to solve. In short, we can do this NOW.

For MANs, we also have the ability to do this now. Basically, see the above paragraph. Not much difference.

WANs offer a totally different problem... My own opinion is that the WANs should be done via wirelines. I can't foresee a bunch of Hams being able to build a large scale WAN, say for the US, at anytime. The cost, logistics, and labor of such a project are tremendous.

And, sorry, but the arguments about the wirelines failing in an emergency don't hold water in the real world... I was able to call my sister in Florida during a recent hurricane at her cell phone. Also, the types of emergencies that are likely to come up will be local in nature... In other words, even if the wirelines fail, they will do so on a local scope. If the LANs and MANs are the least bit hardened, it will be a simple matter to pass traffic on the WAN to the edge of the outage area and then link to the MAN or LAN within the emergency area. Lastly, keep in mind that the Internet (and that is what we are really talking about when we use terms like wirelines) was designed to survive disasters.

This still leaves us with how do we define LAN, MAN, and WAN for the use of discussions. As a starting point, I would offer the following:

LAN -- A sub-network that provides the major services to its users such as: Message reading and sending; Common file transfers; and DX Cluster/Convers servers.

MAN -- A sub-network that provides services to the LANs such as: File transfers; and Long distance Convers servers and DX Clusters.

WAN -- Serves to connect the MANs.

These loose definitions are by no means complete or even necessarily correct... They are only offered as a starting point for discussion.

Thanks for your patience with this long and rambling discussion!

Take Care & 73

Marty Albert - [marty@trucom.com](mailto:marty@trucom.com)  
Amateur Radio: KC6UFM#KC6UFM.#SEMO.MO.USA.NOAM

\*\*\*\*\*  
Interested in Amateur Radio?  
<http://www.trucom.com/ppages/marty>

\*\*\*\*\*  
HAMPS Coordinator  
<http://www.geocities.com/CapeCanaveral/Lab/7067>  
\*\*\*\*\*

---

## 62. Micom-Interlan 5210-A

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>  
Date: Thu, 12 Jun 1997 17:45:09 -0500  
To: "NETSIG list mailing" <netsig@tapr.org>  
Message-ID: <v03020906afc62c3dff65@[192.168.1.2]>  
Rendered body type: text/plain

Does anyone have info on the Micom-Interlan 5210-A card. I need to know the jumper configurations.

Maybe a web site ? I looked around and really didn't find anything.

Cheers - Greg

-----  
Greg Jones, WD5IVD  
Austin, Texas  
wd5ivd@tapr.org  
<http://www.tapr.org/~wd5ivd>  
-----

---

## 63. [NETSIG:3281] Re: Wireless Communications (fwd)

From: gilw9bub@nw4ep.ih.lucent.com (Gil Kowols)  
Date: Thu, 12 Jun 1997 20:52:58 -0500 (CDT)  
To: tapr.org!netsig@nw4ep.ih.lucent.com  
Message-ID: <m0wclXu-000181C@w9bub>  
Rendered body type: text/plain

Forwarded message:

> Original-From: "Greg Jones, WD5IVD" <grayfox!tapr.org!wd5ivd>  
> Original-To: tapr.org!netsig  
> Subject: [NETSIG:3281] Re: Wireless Communications  
>  
> Hi Gary.

> <stuff deleted>

> Sometime, you could never get the necessary site to make the links work.  
> What I am seeing happening now is as more and more commerical wireless  
> companies purchase site locations for big \$\$\$\$, buildings are even more  
> reluctant to let a bunch of amateur radio operators have access to their  
> building. The days of just explaining what you do and how it benefits  
> folks are quickly fading in many parts of the US, if not totally gone. If  
> you haven't tried recently, I have. The other issue I am seeing is the  
> local city ordinances in many places that even require the amateur antennas  
> on a building to be masked in some manner -- the cost can make a node not  
> practical to build.  
>

Amen brother. In this present society with ligation on everyones mind, it is very difficult to get sites in the FLATLAND in buildings.

I (and others) put the first 2 meter repeater on the air in Chicago in 1962. It was easy then. You talked to the building manager about how you were part of Civil Defense, worked the parades, etc., and you had a site.

Not today. The building manager thinks only of the million dollar judgement against him when the antenna falls off the roof and he has to explain how the people who put it up are there FREE!!

If it's a really good site, there's already cellular, PCS, paging, trunking each paying hundreds of dollars a month each. And you want to be up there FREE ????? Get real.

We've lost sites when the manager realized that each antenna was worth a couple of hundred dollars a month on his bottom line for managing the building.

> Anyway, as many of you know on this list, it sometime takes months to years  
> to acquire a site location and finally get equipment on it. Many amateurs  
> do fall into the I'll just use the Internet instead, since it is a lot  
> easier to do. The problem then becomes, they don't have any sites to put



> up RF to go someplace else. While a wireline connection can correct a  
> long-haul issue to someplace else, a group shouldn't stop there -- at least  
> in my thoughts -- they need to take the logical step and find the site to  
> do the RF from. Although whatever a local group decides to do is their  
> choice. All I can do is explain and describe alternate ways of doing  
> things.  
>

This will really choke some people up, but we originally linked  
up our receiver sites (on the perimeter of the city) to the  
transmitter (located in the Loop on a tall building ) WITH  
TELEPHONE LINES. Receiving in the Loop was impossible. Nobody  
used cavities and circulators in those days. The intermod was  
impossible. I measured 20 db of desensing on a receiver in the  
Loop. I put an HP410B on the antenna coax and measured over 1.5  
VOLTS of RF pickup.

I think the people ranting and raving about using telephone lines  
in amateur communications are living in a virtual world. The  
first thing they need to do is get into the real world.

The name of the game is communications. We communicate. Whatever  
it takes.

Down off the soapbox. Sorry, but I can't take much more of this  
religious war from people who want to be more "Catholic than the  
Pope".  
> I think we have to be open minded about what people want to do in  
amateur

> radio. What is possible in your area of the US, probably is  
much  
different  
> from someone else a few hundred miles away let alone on the  
other  
side  
of  
> the US from you.  
>  
> I just hope we can have more logical debates on here like the current  
one  
> happening.  
>  
> Cheers - Greg  
>  
> On Thu, 12 Jun 1997 07:02:09 -0500 (CDT), you said:  
> >  
> > The question of wireless access to the Internet is one we keep  
coming  
> > back to all the time.  
> >  
> > Food for thought...  
> >  
> > Tasted like Brussels sprouts to me, Tom. :)  
> >  
> > Sorry, I don't buy it. I especially don't agree with the guy before  
you  
> > that said because there was rf on each end of it, that made it alright.  
No  
> > way. The telephone or internet linking of two rf networks to get  
somewhere  
> > because there isn't an rf link in place is never going to motivate  
people  
> > to build a link. In an emergency, I would agree that anything goes,  
and  
> > the use of whatever means possible is called for. But for day to day  
use,  
> > it just isn't amateur radio unless it is radio all the way.  
> >  
> > Gary  
> >  
> >  
> > -----  
> > Greg Jones, WD5IVD  
> > Austin, Texas  
> > wd5ivd@tapr.org  
> > <http://www.tapr.org/~wd5ivd>  
> > -----

>  
>  
>  
Gil, W9BUB  
gil@svs.com

---

#### 64. [NETSIG:3288] Micom-Interlan 5210-A -Reply

From: Orville Beach <orv@micom.com>  
Date: Thu, 12 Jun 1997 22:39:56 -0800  
To: netsig@tapr.org  
Message-ID: <s3a07e22.025@micom.com>  
Rendered body type: text/plain

Don't bother looking at [www.micom.com](http://www.micom.com); we  
sold Interlan off about 10 years ago :-)

73 - Orv - w6bi  
Network Manager  
MICOM Communications Corp.

>>> "Greg Jones, WD5IVD" <wd5ivd@tapr.org>  
06/12/97 02:41pm >>>  
Does anyone have info on the Micom-Interlan  
5210-A card. I need to know  
the jumper configurations.

Maybe a web site ? I looked around and  
really didn't find anything.

Cheers - Greg

-----  
Greg Jones, WD5IVD  
Austin, Texas  
wd5ivd@tapr.org  
<http://www.tapr.org/~wd5ivd>  
-----

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#### 65. Re: [NETSIG:3237] ?Increasing the speed of point-to-point link?

From: Ulf.Kumm@t-online.de (Ulf Kumm)  
Date: Fri, 13 Jun 1997 07:26:17 -0700  
To: netsig@tapr.org  
Message-ID: <33A15889.430C@t-online.de>  
Rendered body type: text/plain

Charles E. Gelm wrote:  
>  
> I would like to try to increase the speed of a point-to-point link  
> from 1200 baud to 9600 or more. What I want is:  
>  
> 1. TNC & Radio cost <= \$850 (i.e. <= 2x the cost of 1200 baud).

The TNC3 (manufactured by SYMEK, Germany) costs approx. 500 \$ and  
is capable to run up to 1,2 MBaud AX.25 data rate. There exist some  
plug-in modems from 1200 to 9600, 19200 Bd etc. up to 614 and 1200 kBaud.  
Two modems can be plugged in and operated simultaneously.  
The limit for no-node operation seems to be the 115 kBaud RS232.

The question is, which radio will be used. I am busy developing a  
50 to 500 MHz broadband radio, which can be used as a exciter for  
transverters to 23, 13... cm and higher. Design is for a stereo-  
bandwidth of 100...200 kHz and a data rate of 153 kBaud.

In Tuebingen, Germany, there is a 1,2 MBaud full duplex Packet-Link  
running between two X-Net Nodes with TNC3, using very cheap Satellite  
receivers / dishes on 10 GHz on a distance of 30 km.

73! Ulf  
--  
Ulf Kumm, DK9SJ, D-70597 Stuttgart, Johannes-Kraemer-Str. 34  
eMail: Ulf.Kumm@t-online.de Phone: +49 711 7678-925 Fax: -924  
Internet home: <http://home.t-online.de/home/Ulf.Kumm/main.htm>

---

#### 66. Re: [NETSIG:3291] Re: ?Increasing the speed of point-to-point link?

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>  
Date: Fri, 13 Jun 1997 02:04:44 -0500  
To: netsig@tapr.org  
Message-ID: <v0302090fafc6a0154f5a@[208.134.134.40]>

Rendered body type: text/plain

>Charles E. Gelm wrote:

>>

>> I would like to try to increase the speed of a point-to-point link  
>> from 1200 baud to 9600 or more. What I want is:

>>

>> 1. TNC & Radio cost <= \$850 (i.e. <= 2x the cost of 1200 baud).

>

>The TNC3 (manufactured by SYMEK, Germany) costs approx. 500 \$ and  
>is capable to run up to 1,2 MBaud AX.25 data rate. There exist some  
>plug-in modems from 1200 to 9600, 19200 Bd etc. up to 614 and 1200 kBaud.  
>Two modems can be plugged in and operated simultaneously.  
>The limit for no-node operation seems to be the 115 kBaud RS232.

>

>The question is, which radio will be used. I am busy developing a  
>50 to 500 MHz broadband radio, which can be used as a exciter for  
>transverters to 23, 13... cm and higher. Design is for a stereo-  
>bandwidth of 100...200 kHz and a data rate of 153 kBaud.

This sounds very interesting.

However, the real question is where do we find spectrum to operate a radio like this or others I have seen talked about recently that don't interfere with others already on the selected bands we might want to operate a 1.2Mbaud system as above.

Just something to think about when doing non-spread spectrum data communications systems. One reason for looking into Spread Spectrum systems is that they can be implemented in such a way as to share bands with users already there without them noticing them in operation. A 50-500Mhz wide band 20db+ signal FSK or whatever mdem is going to be noticed -- don't you think ?

Cheers - Greg

-----

Greg Jones, WD5IVD  
Austin, Texas  
wd5ivd@tapr.org  
<http://www.tapr.org/~wd5ivd>

-----

---

## 67. Re: [NETSIG:3292] Re: ?Increasing the speed of point-to-point

From: Marty Albert <marty@trucom.com>  
Date: Fri, 13 Jun 1997 15:40:12 -0500  
To: netsig@tapr.org  
Message-ID: <1.5.4.32.19970613204012.006989cc@mail.trucom.com>  
Rendered body type: text/plain

At 02:01 06/13/97 -0500, Greg wrote:

<snip>

>However, the real question is where do we find spectrum to operate a radio  
>like this or others I have seen talked about recently that don't interfere  
>with others already on the selected bands we might want to operate a  
>1.2Mbaud system as above.

>

>Just something to think about when doing non-spread spectrum data  
>communications systems. One reason for looking into Spread Spectrum  
>systems is that they can be implemented in such a way as to share bands  
>with users already there without them noticing them in operation. A  
>50-500Mhz wide band 20db+ signal FSK or whatever mdem is going to be  
>noticed -- don't you think ?

This is all very well and true, Greg, but there is still a question that has yet to be answered by anyone...

When will such a SS system be available for use in actually building the network?

It is great that there are folks who want to do and enjoy doing the research on SS, but those of us who are building the network are rapidly being backed into a corner. We need to offer better and faster services to the users and we need modems with more bandwidth and less cost than what the 56K systems can offer. SS may be the answer, but when will this happen?

The Slovenian system has some problems in terms of bandwidth, but it is

available NOW and is very inexpensive (I built two units for less than \$100.00), reliable, and reproducible.

The various commercial Part 15 radio/modems are also available but they are a bit on the pricey side.

There are a lot of neat things that can be done with the digital modes, but we need something a lot faster than 56K to do it with.

Take Care & 73

Marty Albert - [marty@trucom.com](mailto:marty@trucom.com)  
Amateur Radio: KC6UFM@KC6UFM.#SEMO.MO.USA.NOAM

\*\*\*\*\*  
Interested in Amateur Radio?  
<http://www.trucom.com/ppages/marty>  
\*\*\*\*\*  
HAMPS Coordinator  
<http://www.geocities.com/CapeCanaveral/Lab/7067>  
\*\*\*\*\*

---

## 68. Re: [NETSIG:3293] Re: ?Increasing the speed of point-to-point

From: Jim Jefferson <[cjeffers@luminet.net](mailto:cjeffers@luminet.net)>  
Date: Fri, 13 Jun 1997 17:47:44 -0500  
To: [netsig@tapr.org](mailto:netsig@tapr.org)  
Message-ID: <1.5.4.32.19970613224744.006af35c@luminet.net>  
Rendered body type: text/plain

>The Slovenian system has some problems in terms of bandwidth, but it is  
>available NOW and is very inexpensive (I built two units for less than  
>\$100.00), reliable, and reproducible.

I'd be interested in hearing how that worked for you...

>There are a lot of neat things that can be done with the digital modes, but  
>we need something a lot faster than 56K to do it with.

Exactly, you've hit the issue right on the head.

73's de

-Jim Jefferson KB0THN  
[cjeffers@luminet.net](mailto:cjeffers@luminet.net)  
<http://www.luminet.net/~cjeffers/>  
<http://nwo.luminet.net/>

---

## 69. Re: [NETSIG:3294] Re: ?Increasing the speed of point-to-point

From: Marty Albert <[marty@trucom.com](mailto:marty@trucom.com)>  
Date: Fri, 13 Jun 1997 18:59:56 -0500  
To: [netsig@tapr.org](mailto:netsig@tapr.org)  
Message-ID: <1.5.4.32.19970613235956.00685d40@mail.trucom.com>  
Rendered body type: text/plain

At 17:49 06/13/97 -0500, Jim wrote:

>>The Slovenian system has some problems in terms of bandwidth, but it is  
>>available NOW and is very inexpensive (I built two units for less than  
>>\$100.00), reliable, and reproducible.

>

>I'd be interested in hearing how that worked for you...

The "test system" is working very nicely... I have the two units set up about 2.5-3.0 miles apart with a pair of 23cm 16 element loop yagis. The antennas are only about 10' up in the air, so LOS isn't all that great!

With the 1.2 Mbps radio modems, I can get a steady 570-590 Kbps total throughput (this is simplex, remember!). With normal compression, this works out to better than the 1.2 Mbps rated.

The radio modems are rated to have ~1 w RF out, but I have been unable to get better than 0.85 w from mine.

Construction was easy and clear... Only problem I had was a bad trace in one of the microstrip lines that, in retrospect, seemed to be due to a faint image from the GIF pattern I printed.

Some of the parts are hard to find here in the US (they are Siemens' parts) but the folks at NTE were of great help in finding substitutes for most parts.

Keep in mind that this puppy has a HUGE bandwidth... My spectrum analyzer came up with over 400 KHz worth of signal. Spurs and such are well down. This is perfectly legal under Part 97, but if there were a bunch of these things, the weak signal folks would raise serious hell!

>>There are a lot of neat things that can be done with the digital modes, but  
>>we need something a lot faster than 56K to do it with.  
>  
>Exactly, you've hit the issue right on the head.

Yep, and we need the hardware to do it with. I actually have got a few notes from folks saying that they have no plan to do anything with SS... They just want to experiment. That's all well and good, but I have news... They aren't experimenting. The commercial sector has been there and done that. We need cheap, fast, reliable solutions for Ham radio.

Take Care & 73

Marty Albert - marty@trucom.com  
Amateur Radio: KC6UFM@KC6UFM.#SEMO.MO.USA.NOAM

\*\*\*\*\*  
Interested in Amateur Radio?  
<http://www.trucom.com/ppages/marty>  
\*\*\*\*\*  
HAMPS Coordinator  
<http://www.geocities.com/CapeCanaveral/Lab/7067>  
\*\*\*\*\*

---

## 70. Re: [NETSIG:3286] Re: Wireless Communications

From: Mike Curtis <wd6ehr@kaiwan.com>  
Date: Fri, 13 Jun 1997 15:31:11 -0700 (PDT)  
To: netsig@tapr.org  
Message-ID: <Pine.SUN.3.95.970613150655.3474B-100000@kaiwan009.kaiwan.com>  
Rendered body type: text/plain

On Thu, 12 Jun 1997, Don Lemke wrote:

> Hi All,  
>  
> While its laudable that everybody is so concerned about emergency  
> communications, I don't think hams will build an amateur network to do a  
> job that is primarily the governments' responsibility. We do have a duty  
> to chip in, of course. But the primary responsibility for any emergency  
> communications system is that of the government.

I can't say that I disagree in principle, but one of the purposes of ham radio being given frequency allocations is for emergency purposes, so even though we're not MANDATED to handle emergencies, it is still the intention of the governments that we do so. So I think we're both sorta-kinda saying the same thing.

> I think its pretty much clear, that if we can outdo the ISPs, that  
> Hams will build MAN's in support of Internet access, and in doing so,  
> end up with allot of extra on-air capability. Such as Packet TV  
> networking, what is called "Video Teleconferencing" on the Internet. And  
> hey, even emergency communications!

And I agree here, too.

I'm not by any means one of these "Ham Radio or Die" freaks. I have absolutely no qualms about tying the two together, even to the extent that I would allow my station to be used freely for internet access, depending on the honesty of users to keep non-part-97 stuff off ham radio.

> This really is how things have always been on Ham Radio. Hams do  
> not buy HF rigs, or build FM repeaters (after the first one in an area)  
> for primarily emergency communications. This stuff DOES get pressed into  
> emergency service, tho, because its omnipresent. And its Omnipresence  
> that is Ham Radio's emergency communication strength.

Or in other words, Amateur Radio is primarily a hobby and we look the fool when we try to make it appear otherwise.

> The biggest advantage to TCP/IP, with Internet connectivity is that  
> of the large efficiency of scale of the application layer development.

> Somebody wants to try something new, and exciting, just does it. They  
> download the demo from the internet, and use it between on-air, or  
> on-air / internet operations. We ignore being in-step with this momentum  
> at our own peril. And Hey, it might even be useful for emergency  
> communications!

> We are given the emergency communications purpose, because we are  
> useful to the government in emergency situations. Not because we are  
> trying to do the governments job, for the responsible organisations in  
> the government. We will not be useful, if we are not doing something,  
> and that something is not omnipresent.

Quite true. We will accomplish far more with contests, ragchewing, stupid bulletins, trivial traffic, and inconsequential personal mail than if we dourly and dutifully erect a system strictly for emergencies.

This is why I think it is silly to insist that ALL bbs forwarding be via strictly ham RF only. At this point of the game, in many areas, it simply is not practical.

I've discussed this with Hank Oredson, who feels basically otherwise based upon his experiences. It turns out that his area has FAR more spectrum per ham available than we here in Los Angeles do. Things that are trivial in the "boondocks" are difficult to impossible in urban and even suburban areas, where most hams live.

And this is compounded terminally when those who seek power for its own sake, those whose only interest is their private repeaters, and others with a narrow scope are in charge of frequency allocations, coordinations, etc.

One thing that I find particularly attractive about SS is that will work without frequency coordination (correct me if I'm wrong).

But Dons point about "just keep working on it and it will eventually get fixed" is certainly along my lines of reasoning. As long as we keep doing things, moving ahead, and abandoning the old and inefficient for the new and improved, we are moving in the right direction.

One GOOD thing to be said about internet/packet gateways is that they greatly speed up the packet network and add a LOT of capabilities we never had before, like working foreign countries at any time of the day at any period of the sunspot cycle using cheap gear and ridiculously small antennae. Go back just ten years and this was nigh impossible. Today, it's commonplace - thanks to internet gateways.

Internet gateways are GOOD. I just think that, with the bandwidth we have (currently) available, we should put a lot more effort into developing it. We could EASILY end up with speeds that would put ISPs to shame.

-- mike

---

## 71. Re: [NETSIG:3293] Re: ?Increasing the speed of point-to-point

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>  
Date: Fri, 13 Jun 1997 20:51:44 -0500  
To: netsig@tapr.org  
Message-ID: <v0302091fafc7a8e890c5@[208.134.134.40]>  
Rendered body type: text/plain

>When will such a SS system be available for use in actually building the  
>network?

Within 12-18 months. I'll be writing a little more about this in the upcoming PSR, but one of the projects is about to run its initial prototypes of the VCO and baseband segments end of this month.

>It is great that there are folks who want to do and enjoy doing the research  
>on SS, but those of us who are building the network are rapidly being backed  
>into a corner. We need to offer better and faster services to the users and  
>we need modems with more bandwidth and less cost than what the 56K systems  
>can offer. SS may be the answer, but when will this happen?  
>

>The Slovenian system has some problems in terms of bandwidth, but it is  
>available NOW and is very inexpensive (I built two units for less than  
>\$100.00), reliable, and reproducible.

I was just making a point about finding spectrum on the bands. If you can build and maintain the Slovenian design and no one in your areas complains

-- have at it.

>The various commercial Part 15 radio/modems are also available but they are  
>a bit on the pricey side.

They are way to pricey.

>There are a lot of neat things that can be done with the digital modes, but  
>we need something a lot faster than 56K to do it with.

At a minimum 256Kbps is the design goal of the 900Mhz radio project. The  
1.2Gig radio project will be shooting for 1.544Mbps, but that funding source  
hasn't started yet.

Perzsonally, I'll be getting along with the existing 9600baud stuff while I  
focus on the 256K and 1.544 (T1) radios in the coming two years.

Cheers - Greg

-----  
Greg Jones, WD5IVD  
Austin, Texas  
wd5ivd@tapr.org  
<http://www.tapr.org/~wd5ivd>  
-----

---

## 72. Ham Radio

From: WBRADFORD@delphi.com  
Date: Fri, 13 Jun 1997 21:56:50 -0400 (EDT)  
To: netsig@tapr.org  
Message-ID: <01IK1F9NL6W291ZLQ4@delphi.com>  
Rendered body type: text/plain

Netsig was so silent for a while, it is nice to see all the activity lately  
regarding an old subject: Do Real Hams use telephone links?

In the pure traditional sense, the answer is no. But based on reality today,  
then the answer must be a strong Yes!

I've been a ham for 34 years, and was Elmered by my dad licensed in the early  
30's when Utah was in the 6th call district and there was no such thing as  
TVI. A lot has happened since then. We can no longer guess a ham's QTH by  
his call sign (W7's in Ohio, avoid W6's 'cause it's just another California  
ham, etc.), homebrew has a Bit different meaning than it did in 1933 or 1963,  
and dozens of other things have changed. My main love is still cw on 21.007  
but in another generation that mode may well have gone the way of AM.

Emergencies and "the big one": When the quake hits, all cellular and  
telephone systems will be down. We will Need radio to communicate with the  
outside world. But once out of the affected area, the rest of the world will  
still rely on telephone systems for efficient communications. The Seagulls  
(or Worm Rodman) may revolt and level Salt Lake City, but with radio, we will  
be able to tie into surviving communications facilities in surrounding areas.  
Telephone facilities. But soon the battery powered satellite telephone will  
be common and we may not even need the local radio system.

To say that hams must never use anything other than radios for communication  
no matter what is just not a reasonable position. When I send a packet  
message to a friend in New England, how can I be sure that someone does not  
relay the message by fone line? And even this wonderful discussion here on  
NETSIG could not happen as it is now if we were to rely on radio-only  
transmission. Not to mention large file transfers and the advantage of fast  
transmissions we enjoy here. We Hams are indeed spending more time at the  
computer screen than we did 10 years ago.

Ham radio will integrate with the new technologies, or it will disappear. I  
choose to maintain the four packet nodes I operate in this area, keep my  
emergency radio system in order, operate DX morse code, try to Elmer new hams,  
and also enjoy the benefits of the internet.

Let us embrace the new technologies while we also Elmer new folks into Ham  
radio. If we insist on "radio only," we will only alienate the new generation,  
and speed the demise of Amateur Radio. The WWW is easy. Ham Radio takes  
effort and we need to show the potential newcomers why Ham Radio is a

worthwhile and good.

73 and Long Live Ham Radio Bill K7EA Salt Lake City

(aka wbradford@delphi.com)

---

### 73. Re: [NETSIG:3292] Re: ?Increasing the speed of point-to-point

From: Ulf.Kumm@t-online.de (Ulf Kumm)  
Date: Sat, 14 Jun 1997 15:40:35 -0700  
To: netsig@tapr.org  
Message-ID: <33A31DE3.5920@t-online.de>  
Rendered body type: text/plain

Greg Jones, WD5IVD wrote:

>  
> >The question is, which radio will be used. I am busy developing a  
> >50 to 500 MHz broadband radio, which can be used as a exciter for  
> >transverters to 23, 13... cm and higher. Design is for a stereo-  
> >bandwidth of 100...200 kHz and a data rate of 153 kBaud.  
>  
> This sounds very interesting.  
>  
> However, the real question is where do we find spectrum to operate a radio  
> like this or others I have seen talked about recently that don't interfer  
> with others already on the selected bands we might want to operate a  
> 1.2Mbaud system as above.  
>

oops, maybe I have been misunderstood, the radio, I mentioned may  
be used in a band of approx. 10...20 MHz width, e.g. 140-150 or 430-440MHz  
etc. The modulation-bandwidth will be similar to stereo FM (200 kHz).  
It is not a radio for 50 to 500 MHz! This would really make no sense.

--

Ulf Kumm, DK9SJ, D-70597 Stuttgart, Johannes-Kraemer-Str. 34  
eMail: Ulf.Kumm@t-online.de Phone: +49 711 7678-925 Fax: -924  
Internet home: <http://home.t-online.de/home/Ulf.Kumm/main.htm>

---

### 74. Re: [NETSIG:3299] Re: ?Increasing the speed of point-to-point

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>  
Date: Sat, 14 Jun 1997 10:25:07 -0500  
To: netsig@tapr.org  
Message-ID: <v0302090fafc866fcf4cb@[208.134.134.40]>  
Rendered body type: text/plain

>Greg Jones, WD5IVD wrote:

>>  
>> >The question is, which radio will be used. I am busy developing a  
>> >50 to 500 MHz broadband radio, which can be used as a exciter for  
>> >transverters to 23, 13... cm and higher. Design is for a stereo-  
>> >bandwidth of 100...200 kHz and a data rate of 153 kBaud.  
>>  
>> This sounds very interesting.  
>>  
>> However, the real question is where do we find spectrum to operate a radio  
>> like this or others I have seen talked about recently that don't interfer  
>> with others already on the selected bands we might want to operate a  
>> 1.2Mbaud system as above.  
>>  
>  
>oops, maybe I have been misunderstood, the radio, I mentioned may  
>be used in a band of approx. 10...20 MHz width, e.g. 140-150 or 430-440MHz  
>etc. The modulation-bandwidth will be similar to stereo FM (200 kHz).  
>It is not a radio for 50 to 500 MHz! This would really make no sense.  
>

I understood. It sounds like an interesting system.

However, the issue being that ATV people here in the US sometime use 4Mhz  
or 6Mhz for their stuff and get all sorts of flak for the amount of space  
they use vs users and the preceptable signal level that other narrow band  
users have to accept. 10..20Mhz widths for a data system has this issue in  
spades.

Weak-signal and satellite users have a bad enough heartburn at times about  
potential SS systems running 1 watt or less. What will a 10-20Mhz  
wide-band data carrier at 20db cause ?

Cheers - Greg



-----  
Greg Jones, WD5IVD  
Austin, Texas  
wd5ivd@tapr.org  
<http://www.tapr.org/~wd5ivd>  
-----

---

## 75. Help looking for software

From: "John Dundas" <J.M.Dundas@btinternet.com>  
Date: Sat, 14 Jun 1997 15:40:04 +0100  
To: <netsig@tapr.org>  
Message-ID: <199706141537.QAA16518@snow.btinternet.com>  
Rendered body type: text/plain

Hello One and all,

I am looking for software called Netwalker or Nodewalker. Its designed to start at point A and work its way through a network, making a map as it goes. I did have a site to download the software but have since lost it, as usual.

Any help would be appreciated.

rgds

John Dundas

J.M.Dundas@btinternet.com

Key Radio Systems (Scotland) Ltd      Homepages

<http://www.btinternet.com/~keyradio.scot/>

---

## 76. Re: [NETSIG:3297] Re: ?Increasing the speed of point-to-point

From: Marty Albert <marty@trucom.com>  
Date: Sat, 14 Jun 1997 12:38:02 -0500  
To: netsig@tapr.org  
Message-ID: <1.5.4.32.19970614173802.00681d64@mail.trucom.com>  
Rendered body type: text/plain

At 21:02 06/13/97 -0500, Greg wrote:

>>When will such a SS system be available for use in actually building the  
>>network?  
>

>Within 12-18 months. I'll be writing a little more about this in the  
>upcominb PSR, but one of the projects is about to run its initial prototypes  
>of the VCO and baseband segments end of this month.

OK, now we're getting somewhere...

Any idea, Greg, if this will be sold as a commercial unit (ala the DSY 56K modem) or if plans will be made available for homebrew?

>>There are a lot of neat things that can be done with the digital modes, but  
>>we need something a lot faster than 56K to do it with.  
>

>At a minimum 256Kbps is the design goal of the 900Mhz radio project. The  
>1.2Gig radio project wil be shooting for 1.544Mbps, but that funding source  
>hasn't started yet.

Ah, T1... Now we're cookin'!

>Perzsonally, I'll be getting along with the existing 9600baud stuff while I  
>focus on the 256K and 1.544 (T1) radios in the coming two years.

The problem is that there may not be any thing left to work with in 2 years!

I think that some folks have put off network building because they are expecting something new "Real Soon Now" and that hasn't happened. I know that is part of the problem around here. I just hate the idea of building a network and getting done just in time to replace it all. :)

Thanks for the information and please keep us network builders advised as to what is happening and when it will happen.

Take Care & 73

Marty Albert - [marty@trucom.com](mailto:marty@trucom.com)  
Amateur Radio: KC6UFM@KC6UFM.#SEMO.MO.USA.NOAM

```
*****
Interested in Amateur Radio?
http://www.trucom.com/ppages/marty
*****
HAMPS Coordinator
http://www.geocities.com/CapeCanaveral/Lab/7067
*****
```

---

## 77. Re: [NETSIG:3298] Ham Radio

From: Marty Albert <[marty@trucom.com](mailto:marty@trucom.com)>  
Date: Sat, 14 Jun 1997 12:38:03 -0500  
To: [netsig@tapr.org](mailto:netsig@tapr.org)  
Message-ID: <1.5.4.32.19970614173803.00683ae4@mail.trucom.com>  
Rendered body type: text/plain

At 21:02 06/13/97 -0500, Bill wrote:  
>Netsig was so silent for a while, it is nice to see all the activity lately  
>regarding an old subject: Do Real Hams use telephone links?  
>  
>  
>In the pure traditional sense, the answer is no. But based on reality today,  
>then the answer must be a strong Yes!  
>  
>  
>I've been a ham for 34 years, and was Elmered by my dad licensed in the early  
>30's when Utah was in the 6th call district and there was no such thing as  
>TVI. A lot has happened since then. We can no longer guess a ham's QTH by  
>his call sign (W7's in Ohio, avoid W6's 'cause it's just another California  
>ham, etc.), homebrew has a Bit different meaning than it did in 1933 or 1963,  
>and dozens of other things have changed. My main love is still cw on 21.007  
>but in another generation that mode may well have gone the way of AM.  
>  
>  
>Emergencies and "the big one": When the quake hits, all cellular and  
>telephone systems will be down. We will Need radio to communicate with the  
>outside world. But once out of the affected area, the rest of the world will  
>still rely on telephone systems for efficient communications. The Seagulls  
>(or Worm Rodman) may revolt and level Salt Lake City, but with radio, we will  
>be able to tie into surviving communications facilities in surrounding areas.  
>Telephone facilities. But soon the battery powered satellite telephone will  
>be common and we may not even need the local radio system.  
>  
>  
>To say that hams must never use anything other than radios for communication  
>no matter what is just not a reasonable position. When I send a packet  
>message to a friend in New England, how can I be sure that someone does not  
>relay the message by fone line? And even this wonderful discussion here on  
>NETSIG could not happen as it is now if we were to rely on radio-only  
>transmission. Not to mention large file transfers and the advantage of fast  
>transmissions we enjoy here. We Hams are indeed spending more time at the  
>computer screen than we did 10 years ago.  
>  
>Ham radio will integrate with the new technologies, or it will disappear. I  
>choose to maintain the four packet nodes I operate in this area, keep my  
>emergency radio system in order, operate DX morse code, try to Elmer new hams,  
>and also enjoy the benefits of the internet.  
>  
>  
>Let us embrace the new technologies while we also Elmer new folks into Ham  
>radio. If we insist on "radio only," we will only alienate the new generation,  
>and speed the demise of Amateur Radio. The WWW is easy. Ham Radio takes  
>effort and we need to show the potential newcomers why Ham Radio is a  
>worthwhile and good.  
>  
>73 and Long Live Ham Radio Bill K7EA Salt Lake City  
>  
>(aka [wbradford@delphi.com](mailto:wbradford@delphi.com))  
>

Sorry for the long quote, but Bill's position is so reasonable and well  
thought out that it really needs to be repeated...

Perhaps several times!

It is nice to see a post that is not part of some jihad.

Take Care & 73

Marty Albert - marty@trucom.com  
Amateur Radio: KC6UFM@KC6UFM.#SEMO.MO.USA.NOAM

\*\*\*\*\*  
Interested in Amateur Radio?  
<http://www.trucom.com/ppages/marty>  
\*\*\*\*\*  
HAMPS Coordinator  
<http://www.geocities.com/CapeCanaveral/Lab/7067>  
\*\*\*\*\*

---

## 78. Re: [NETSIG:3302] Re: ?Increasing the speed of point-to-point

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>  
Date: Sat, 14 Jun 1997 13:37:39 -0500  
To: netsig@tapr.org  
Message-ID: <v03020917afc890bec6e5@[208.134.134.40]>  
Rendered body type: text/plain

>At 21:02 06/13/97 -0500, Greg wrote:  
>>>When will such a SS system be available for use in actually building the  
>>>network?  
>>  
>>Within 12-18 months. I'll be writing a little more about this in the  
>>upcominb PSR, but one of the projects is about to run its initial prototypes  
>>of the VCO and baseband segments end of this month.  
>  
>OK, now we're getting somewhere...

This has been stated several times in the PSR. Nothing new.

>Any idea, Greg, if this will be sold as a commercial unit (ala the DSY 56K  
>modem) or if plans will be made available for homebrew?

Who knows. Alpha and Beta units will most likely be semi-kits. If TAPR  
does units it will probably be a semi-kit of some sort, although the goal  
will be to license the technology....as with any TAPR R&D project...in  
order to fund other things. This all happening next year maybe.

>>>There are a lot of neat things that can be done with the digital modes, but  
>>>we need something a lot faster than 56K to do it with.  
>>  
>>At a minimum 256Kbps is the design goal of the 900Mhz radio project. The  
>>1.2Gig radio project will be shooting for 1.544Mbps, but that funding source  
>>hasn't started yet.  
>  
>Ah, T1... Now we're cookin'!

Well -- that project is still in rev up mode waiting for funding to start.  
The 900Mhz FHSS 200-256Kbps radio is in design and proto layout this  
summer. The issue that everyone on this list and what I'll be writing  
about in the upcoming PSR is that TAPR is looking very long range. We are  
trying to invest cash and volunteer time into stuff that is not easy, which  
is complicated to design, but if pulled off will have potential large  
payoffs for amateur digital communications and the hobby overall. This is  
all about R&D. The group doing the 900Mhz radio I have very high  
confidence in, but this is amateur radio and the project is being done by  
volunteers. Who knows if we have a workable unit in the end. We did with  
the DSP-93, so I think we will have something with the 900Mhz radio project  
as well.

As to the potential 1.2 or 2.4 1.544Mbps radio. When the money shows up,  
the design will begin. 1.2 is a much more interesting band because you can  
get a little more range than 2.4 and we have 60Mhz in the band. The issue  
here is that there is not a lot of RF stuff in the commercial world to  
leverage off of as some of the ISM bands.

>  
>>Perzsonally, I'll be getting along with the existing 9600baud stuff while I  
>>focus on the 256K and 1.544 (T1) radios in the coming two years.  
>  
>The problem is that there may not be any thing left to work with in 2 years!

Does it matter ? And then I have to ask the question 'left of what ?'

While a lot of regional groups are letting their networks die, I don't think it is because of a lack of technology. There are plenty of solutions available as you have pointed out. The issue I think is rooted deeper and is much difficult to describe. Some of it is burn out, some of it has to do with the fact that it is fun to design and build networks but many find that is it a lot of work afterwards and without people saying how great the thing built is -- interest is lost again to maintain it, and some of it is just change. Things change and die.

If TAPR or someone else does come out with something that lights the imagination and gets people involved in doing something -- it could well be that we have a new group of people building things instead of the current or old groups. Some will be able to hang on until a transition is possible and some will just find something else in the hobby to do.

What Dewayne Hendricks, myself, and others are trying to point out with high-speed wireless data systems is the fact that we must design systems that don't interfere and can be overlaid on existing 'occupied' but under 'utilized' amateur radio bands.

While the focus is going to be on data systems to begin with on 900Mhz and up. I think the real impact will come when we begin to see voice repeaters that don't need freq coordination, but just the need to make sure groups are using different codes and center freqs.

The ability to link audio system together anywhere in the world using the amateur or other digital systems or the ability to do voice, data, video, and the like with one radio instead of several.

>I think that some folks have put off network building because they are  
>expecting something new "Real Soon Now" and that hasn't happened. I know  
>that is part of the problem around here. I just hate the idea of building a  
>network and getting done just in time to replace it all. :)

That is their mistake then. After 15 years of doing this, there have always been groups with the excuse of not doing something because 1) it wasn't fast enough, 2) they were waiting for the next speed increase, 3) or any of a number of other reasons. I remember a group in the North that said 9600 baud wasn't fast enough in 1986 and they were going to wait for 56K. Well 56K wasn't far behind the group then said 56K wasn't fast enough....well there are two groups...those that do and those that talk. It is a fact in amateurs radio that we have a lot of talkers in our ranks -- or we wouldn't have people talking on the radios. :-)

If people are going to build stuff, then get going on it. What you build is not important. What is important is that you are building something. What is also important is that you have sites, you find it fun, and you are hopefully learning something along the way.

The next advice I would give is start small (real small) and then work on growth. A lot of people make the mistake of wanting to build a few hundred miles of network when they probably just need to network across town to start and get a handle about what is happening. Until you can build something that covers a city or county or local neighbor, building something more complicated might be tough road to follow. Anyway, big is not often better.

>Thanks for the information and please keep us network builders advised as to  
>what is happening and when it will happen.

Just have to read the TAPR PSR -- it is all there.

Cheers - Greg

-----  
Greg Jones, WD5IVD  
Austin, Texas  
wd5ivd@tapr.org  
<http://www.tapr.org/~wd5ivd>  
-----

---

## 79. Re: [NETSIG:3291] Re: ?Increasing the speed of point-to-point link?

From: "Charles E. Gelm" <gelmc@erinet.com>  
Date: Sat, 14 Jun 1997 19:35:49 -0700  
To: netsig@tapr.org

Message-ID: <33A35505.1001@erinet.com>  
Rendered body type: text/plain

Ulf Kumm wrote:

>  
> Charles E. Gelm wrote:  
> >  
> > I would like to try to increase the speed of a point-to-point link  
> > from 1200 baud to 9600 or more. What I want is:  
> >  
> > 1. TNC & Radio cost <= \$850 (i.e. <= 2x the cost of 1200 baud).  
>  
> The TNC3 (manufactured by SYMEK, Germany) costs approx. 500 \$ and  
> is capable to run up to 1,2 MBaud AX.25 data rate. There exist some  
> plug-in modems from 1200 to 9600, 19200 Bd etc. up to 614 and 1200 kBaud.  
> Two modems can be plugged in and operated simultaneously.  
> The limit for no-node operation seems to be the 115 kBaud RS232.  
>  
> The question is, which radio will be used.<snip>

Ah, the 'rub'. What radio will match the TNC3 with 9k6 - 19k2 modems ?

> Ulf Kumm, DK9SJ, D-70597 Stuttgart, Johannes-Kraemer-Str. 34  
> eMail: Ulf.Kumm@t-online.de Phone: +49 711 7678-925 Fax: -924  
> Internet home: <http://home.t-online.de/home/Ulf.Kumm/main.htm>

Thanks for your response, Ulf. That TNC3 looks very interesting !

73, Chuck

---

## 80. Re: [NETSIG:3305] Re: ?Increasing the speed of point-to-point link?

From: Ulf.Kumm@t-online.de (Ulf Kumm)  
Date: Mon, 16 Jun 1997 07:24:25 -0700  
To: netsig@tapr.org  
Message-ID: <33A54C99.71B3@t-online.de>  
Rendered body type: text/plain

Charles E. Gelm wrote:

>  
> Ulf Kumm wrote:.....  
> > The TNC3 (manufactured by SYMEK, Germany) costs approx. 500 \$ and  
> > is capable to run up to 1,2 MBaud AX.25 data rate. There exist some  
> > plug-in modems from 1200 to 9600, 19200 Bd etc. up to 614 and 1200 kBaud.  
> > Two modems can be plugged in and operated simultaneously.  
> > The limit for no-node operation seems to be the 115 kBaud RS232.  
> >  
> > The question is, which radio will be used.<snip>  
>  
> Ah, the 'rub'. What radio will match the TNC3 with 9k6 - 19k2 modems ?

TEKK KS960 or AZDEN PCS9600 will go up to 19200, but above, the 'normal' radios cannot be used because of the narrow IF filters. Above 19200 up to 150 kBaud, FM-stereo filters (200 kHz width) have to be used. It would be possible to modify a fm broadcast receiver with changed osc. and rf stages. For baudrates above 150k, I do not know a adequate if-filter. Very high baudrates can be easily transmitted and received using atv equipment with 4.5 MHz bandwidth.

73! Ulf, DK9SJ

---

## 81. RE: [NETSIG:3295] Re: ?Increasing the speed of point-to-point

From: "Russ, Don" <DRuss@mdsroc.com>  
Date: Mon, 16 Jun 1997 09:41:35 -0400  
To: "'netsig@tapr.org'" <netsig@tapr.org>  
Message-ID: <c=US%a=\_%p=CMI%l=MDSNTE-970616134135Z-244@mdsnte.inside.mdsroc.com>  
Rendered body type: text/plain

What are you using for an interface card? One of the problems I have had in running a high speed P-P link is that I would need at least 2 synchronous 2-MBPS serial ports and DMA. The only port that I know of that can handle this is the packet Twin from Pac-Com and this is only one port. Otherwise the Packet Ten can give 5 ports, three of which can haul this sort of data.

BTW I have a Ten and several twins to play with but haven't the time.

What I would like to know is: Are their other cards?

Has anyone used the P-Twin for FD high speed?

Has anyone tried to get the drivers for the P-Twin to load into a non Gracillis NOS or to get drivers for LINUX?

Don.

Don Russ  
Data Systems, Rochester, NY  
Advanced Development Engineer  
N2CZL@WB2PSI.#wny.ny.usa.na  
Homepage -  
<http://www.frontiernet.net/~microwav>

Microwave  
a division of California Microwave  
donr@mdsroc.com - <http://www.mdsroc.com>

>-----  
>From: Marty Albert[SMTP:marty@trucom.com]  
>Sent: Friday, June 13, 1997 8:09 PM  
>To: netsig@tapr.org  
>Subject: [NETSIG:3295] Re: ?Increasing the speed of point-to-point  
>  
>At 17:49 06/13/97 -0500, Jim wrote:  
>>>The Slovenian system has some problems in terms of bandwidth, but it is  
>>>available NOW and is very inexpensive (I built two units for less than  
>>>\$100.00), reliable, and reproducible.  
>>  
>>I'd be interested in hearing how that worked for you...  
>  
>The "test system" is working very nicely... I have the two units set up  
>about 2.5-3.0 miles apart with a pair of 23cm 16 element loop yagis.  
>The  
>antennas are only about 10' up in the air, so LOS isn't all that great!  
>  
>With the 1.2 Mbps radio modems, I can get a steady 570-590 Kbps total  
>throughput (this is simplex, remember!). With normal compression, this  
>works  
>out to better than the 1.2 Mbps rated.  
>  
>The radio modems are rated to have ~1 w RF out, but I have been unable  
>to  
>get better than 0.85 w from mine.  
>  
>Construction was easy and clear... Only problem I had was a bad trace  
>in one  
>of the microstrip lines that, in retrospect, seemed to be due to a  
>faint  
>image from the GIF pattern I printed.  
>  
>Some of the parts are hard to find here in the US (they are Siemens'  
>parts)  
>but the folks at NTE were of great help in finding substitutes for most  
>parts.  
>  
>Keep in mind that this puppy has a HUGE bandwidth... My spectrum  
>analyzer  
>came up with over 400 KHz worth of signal. Spurs and such are well  
>down.  
>This is perfectly legal under Part 97, but if there were a bunch of  
>these  
>things, the weak signal folks would raise serious hell!  
>  
>  
>>>There are a lot of neat things that can be done with the digital modes, but  
>>>we need something a lot faster than 56K to do it with.  
>>  
>>Exactly, you've hit the issue right on the head.  
>  
>Yep, and we need the hardware to do it with. I actually have got a few  
>notes  
>from folks saying that they have no plan to do anything with SS... They  
>just  
>want to experiment. That's all well and good, but I have news... They  
>aren't  
>experimenting. The commercial sector has been there and done that. We  
>need  
>cheap, fast, reliable solutions for Ham radio.  
>  
>Take Care & 73

>  
>  
>Marty Albert - marty@trucom.com  
>Amateur Radio: KC6UFM@KC6UFM.#SEMO.MO.USA.NOAM  
>  
>\*\*\*\*\*  
>Interested in Amateur Radio?  
><http://www.trucom.com/ppages/marty>  
>\*\*\*\*\*  
>HAMPS Coordinator  
><http://www.geocities.com/CapeCanaveral/Lab/7067>  
>\*\*\*\*\*  
>  
>

---

## 82. Re:[ NETSIG:3289] Wireless Communications

From: Don Lemke <wb9mjn@wb9mjn.ampr.org>  
Date: Mon, 16 Jun 1997 14:20:51 -0500  
To: netsig@tapr.org  
Message-ID: <33A59213.3E68@wb9mjn.ampr.org>  
Rendered body type: text/plain

Hi Gil, Greg and Gary,

Mounting antennas on buildings is an advantage of panel antennas.

The high f/b ratio allows for mounting directly on a building surface. Since these antennas are not in wide favor with 2 way radio people mostly due to unfamiliarity, the space for planar antennas is quite available on most buildings. Many buildings are too high for cellular panel antennas. If cellular panel antennas get mounted on these buildings, its down the side of the building somewhere. Leaving the Elevator equipment room (cupola) vertical outdoor walls, available. This is also a low risk spot, since if the antenna mounting fails, the antenna falls onto the roof of the building. A panel antenna doesn't look like an antenna from the ground. Its rectangular like the building, and may be mistaken easily as a grated window.

The cupola walls are an idea place for the antenna, electrically. As the top of the cupola is usually full with rate paying antennas, and an omni really doesn't get a good chance to operate as an omni. An omni on a rooftop, is also a good lightning target. And thus either an antenna failure from lightning will happen, or the significant cost of a more expensive lightning resistant antenna design is required. An omni will pipe the high power commercial energy right into the amateur gear, as well. As the that energy is being directed right at the main pattern lobe of the amateur omni antenna. This many times requires extra expense to deal with. A panel antenna mounted on the cupola rejects the rooftop high power commercial energy by 20 dB or more. Kinda like having a free cavity.

--

73, Don.

AMPRNet : wb9mjn@wb9mjn.ampr.org[44.72.98.19]  
Internet: wb9mjn%wb9mjn.ampr.org@uugate.aim.utah.edu  
Website: <http://www.qth.com/antpanel>

---

## 83. Re: [NETSIG:3307] Re: ?Increasing the speed of point-to-point

From: "Charles E. Gelm" <gelmce@erinet.com>  
Date: Tue, 17 Jun 1997 21:19:12 -0700  
To: netsig@tapr.org  
Message-ID: <33A761C0.5470@erinet.com>  
Rendered body type: text/plain

Russ, Don wrote:

>

> What are you using for an interface card? <snip>

I tried a packet twin with a kantronics dem9600 and an icom 481h. I never got it to receive anything and when it transmitted, it locked up in xmit. I had to disconnect the power to the radio to get it to stop. rf problem, no doubt.

Chuck

## 84. Re: [NETSIG:3295] Re: ?Increasing the speed of point-to-point

From: Anuj <anuj@system3.net>  
Date: Fri, 20 Jun 1997 20:46:48 -0700  
To: netsig@tapr.org  
Cc: gagan <webmaster@system3.net>  
Message-ID: <33AB4EA8.947@system3.net>  
Rendered body type: text/plain

Marty Albert wrote:

>  
> At 17:49 06/13/97 -0500, Jim wrote:  
> >>The Slovenian system has some problems in terms of bandwidth, but it is  
> >>available NOW and is very inexpensive (I built two units for less than  
> >>\$100.00), reliable, and reproducible.  
> >  
> >I'd be interested in hearing how that worked for you...  
> Hi,  
My name is anuj. I have just started working for ICOM Two-Way  
professional radios in India. Right now I don't have much knowledge  
about spread spectrum radios. But surely i would like to know much more  
as we are having one radio working in the range of 136-174MHz band and  
having the switchable RF o/p power of 25W/45W. I would like to know from  
u people:  
1> which radio modem I can use  
2> From where I can get better technical information about the radio  
modems.  
3> Which are the various companies who are dealing in radio modems  
4> If I want ,from where i can get the information to develop my own  
radio modem.

If any of u can help me I would really appreciate this  
Anuj..

=====  
anuj@system3.net

Want to know India better visit us <http://www.system3.net>

=====  
> The "test system" is working very nicely... I have the two units set up  
> about 2.5-3.0 miles apart with a pair of 23cm 16 element loop yagis. The  
> antennas are only about 10' up in the air, so LOS isn't all that great!  
>  
> With the 1.2 Mbps radio modems, I can get a steady 570-590 Kbps total  
> throughput (this is simplex, remember!). With normal compression, this works  
> out to better than the 1.2 Mbps rated.  
>  
> The radio modems are rated to have ~1 w RF out, but I have been unable to  
> get better than 0.85 w from mine.  
>  
> Construction was easy and clear... Only problem I had was a bad trace in one  
> of the microstrip lines that, in retrospect, seemed to be due to a faint  
> image from the GIF pattern I printed.  
>  
> Some of the parts are hard to find here in the US (they are Siemens' parts)  
> but the folks at NTE were of great help in finding substitutes for most parts.  
>  
> Keep in mind that this puppy has a HUGE bandwidth... My spectrum analyzer  
> came up with over 400 KHz worth of signal. Spurs and such are well down.  
> This is perfectly legal under Part 97, but if there were a bunch of these  
> things, the weak signal folks would raise serious hell!  
>  
> >>There are a lot of neat things that can be done with the digital modes, but  
> >>we need something a lot faster than 56K to do it with.  
> >  
> >Exactly, you've hit the issue right on the head.  
>  
> Yep, and we need the hardware to do it with. I actually have got a few notes  
> from folks saying that they have no plan to do anything with SS... They just  
> want to experiment. That's all well and good, but I have news... They aren't  
> experimenting. The commercial sector has been there and done that. We need  
> cheap, fast, reliable solutions for Ham radio.  
>  
> Take Care & 73  
>  
> Marty Albert - marty@trucom.com  
> Amateur Radio: KC6UFM@KC6UFM.#SEMO.MO.USA.NOAM  
>  
> \*\*\*\*\*  
> Interested in Amateur Radio?



```
> http://www.trucom.com/ppages/marty
> *****
> HAMPS Coordinator
> http://www.geocities.com/CapeCanaveral/Lab/7067
> *****
```

---

## 85. Mess Up

From: Chuck Hast <wchast@utilpart.com>  
Date: Fri, 20 Jun 1997 16:45:17 -0400  
To: netsig@tapr.org  
Message-ID: <33AAEBDD.947190EC@utilpart.com>  
Rendered body type: text/plain

I understand I had a load of mail bounce on my address this past week.

Appears that the administrator upgraded the mail package, and it -- a Microsoft product--- made some assumptions and applied them one of them was to change my address to something that was NOT my published address.

It is corrected now, I am sorry about this and the inconvenience it has caused. I have been told it was corrected this morning. This happened while I was away on a trip so did not find out about it until I returned.

--  
Chuck Hast  
wchast@utilpart.com

kp4djt

---

## 86. KE4ZV posting

From: Steve Stroh <strohs@halcyon.com>  
Date: Tue, 24 Jun 1997 14:16:11 -0700 (PDT)  
To: TAPR Networking SIG Mailing List <netsig@tapr.org>  
Message-ID: <Pine.ULT.3.96.970624141220.5401A-100000@coho.halcyon.com>  
Rendered body type: text/plain

I guess I should start calling these "yet another in a series" of gems posted to the rec.radio.amateur.digital.misc newsgroup by Gary KE4ZV.

Steve N8GNJ  
NetSIG Coordinator

--  
Steve Stroh Woodinville, Washington, USA steve@strohpub.com  
Please use the Reply-To: address- I'm phasing out my Halcyon account.

----- Forwarded message -----  
Date: Sat, 21 Jun 1997 23:18:48 GMT  
From: Gary Coffman <ke4zv@bellsouth.net>  
Newsgroups: rec.radio.amateur.digital.misc  
Subject: Re: TCP/IP "Logic"

On Fri, 20 Jun 1997 12:18:27 -0800, Hank Oredson <hank\_oredson@mentorg.com> wrote:

<multiple quoted messages snipped- N8GNJ>

>You got our help.  
>  
>What should we do?

While I doubt Hank is being sincere here, there are a number of things which could be done. But first there must be a realization which may be painful. And that is that we can do some things well via amateur packet radio, but we can't do all things well via amateur packet radio. We should take a realistic look at what we can do well, and do that. And we should take a realistic look at things we can't do well and find alternative ways to accomplish the tasks we need done. That may include using resources outside of amateur radio.

First of all, what we can do well is high performance LANs and MANs. We should be pushing as hard as we can to do so in every packet community. Most of us have lived so long in really horrible low speed LANs that our natural first inclination is to conserve bandwidth at all costs. That idea

has been very crippling. It has made the internet seem a very attractive alternative to many in our user communities. And it is unnecessary.

We know several ways to do high performance LANs and MANs. In Ottawa and in Georgia, we base our LANs on 56 kb duplex repeaters. That's off the shelf and it works. But there are other ways. Glen Elmore's Hubmaster is another way. CDMA clusters are another way. Karn's microcells are another way. Etc. Amateurs should be looking at all of this and implementing the systems which make sense for their specific terrain and user communities. It is likely that one size won't fit all and that we will wind up with a number of different LAN topologies and link level protocols in order to best deal with our particular situations. We shouldn't be afraid to be different as long as we're fast.

Where feasible, we should be linking our LANs into MANs with the highest speed trunks we can fashion. 56 kb is the \*slowest\* speed we should consider, and that should be full duplex. We should do much better if we can. We should be thinking in terms of T1 systems, or ethernet over gunnplexers, etc. We know how to do this, and terrain permitting, we can do this.

But once we get past about 8 hops, we run into another problem, latency. That's the demon which kills any hope of a national or global switched network done completely over terrestrial packet switched radio. Each hop we make doubles the effective latency of the underlying transport, IE if we're running 56 kb, a relay hop increases our response time to that of a 28 kb circuit, two hops increases our response time to that of a 14 kb circuit, etc. By 8 hops we're down to a response time slower than a 300 baud circuit.

Now we still have the throughput of the fast channel because we can pipeline our data, but the responsiveness of the network gets so bad that we can't do realtime events anymore. The network is no longer transparent. Things we can do on a LAN break when done over the network because of the huge latencies we accumulate. That's not acceptable.

We reach this point at a distance of about 400 miles (varies according to terrain). So that's about the maximum size we can directly network with terrestrial VHF/UHF switched backbones. There are other possible options. The way the wired network gets around this problem is to have long distance bypass trunks. They span in a single hop distances which would take hundreds of hops in normal practice.

We can attempt to do that in amateur radio three different ways. The first and most desirable way is with a GEO satellite. That can span a hemisphere in a single hop. If there is adequate transponder capacity, this can be an ideal solution to our problem. But GEO birds are horribly expensive, and power is incredibly dear. To do this we're looking at a cost 20 times that of P3D, and that stretched amateur finances to the limit (and perhaps beyond). Plus we need teleports at most of our MAN sites. That's not horribly expensive when looked at one at a time, but the total ground station network rapidly becomes hugely expensive as well. I'd suggest that this system is beyond our means at this time. Cheaper launch costs may eventually bring this within our reach.

The second way we can do this is to install systems of terrestrial bypass trunks. These span dedicated routes using bit regeneration instead of store and forward switches. That gives us a minimal impact on latency, with the loss of but a single bit time per relay. These trunks would need to crisscross the continent in parallel with the switched trunks for more local transport. And they must be non-contending and have a very good SNR and fade margin. This too becomes hugely expensive, even more costly than a GEO relay. I'd suggest that this too is beyond our means, and likely to stay that way indefinitely since there is nothing on the horizon which will reduce its cost.

The third way we can address the problem with amateur radio is by using HF. This can span a continent in a single hop, and at very low cost. We are at the mercy of propagation, but with ALE techniques and frequency agility to follow the MUF, we can mostly work around that. The real problem is capacity. We are limited by regulation at HF to 300 baud. We can use symbol overloading to get a higher bps than that, but capacity is still a very very serious bottleneck. We can do \*very\* thin trunks at HF, but barring major regulatory reform, we can't handle the bulk of our transcontinental traffic this way. It'll do to handle a few mouse clicks, but it can't serve most of the applications we'd like to run.

Now with smart network software, we can pair our switched trunks, with their high capacity and high latency, with our HF links, with their very

low capacity but also very low latency to form an asymmetrical transport. That can service some applications in a satisfactory way. This is something we should try, especially for shorter distances such as the 8 to 16 hop range between MANs. It might prove quite useful. But it is unlikely to be satisfactory for a continental network.

Those are our basic amateur radio packet switched network options. None of them are likely to be feasible soon, none are totally satisfactory, and none of them are easily implemented. All of them are likely to need different link level protocols to perform satisfactorily, even some of the LAN/MAN concepts require a different link layer protocol. So we are faced with internetworking over them. Fortunately, that problem has a solution. It is called TCP/IP. It is designed to work over varying link level transports. Whether that's AX25, or a token passing protocol, or even non-packet transports like Clover, TCP/IP can run on top of them to form a coherent internet where any user application can work with any other user application, no matter where in the networks they may be.

Now it should be clear that we aren't going to have a national packet switched network with totally amateur transport for a long time to come. And we may never be able to supply a global network. The costs are too high, the latencies are too long, or the transports are too thin. But there is an alternative. We can make use of the wireline services to provide wormholes between MANs we can't service properly with amateur trunks. Primarily this is suited to dealing with the long distance bypass trunks needed to reduce latency, IE where end to end distances are greater than 400 miles. This can be hugely useful to us by allowing us to integrate our LANs/MANs now instead of at some indefinite time in the future. This can let us work now on applications which can be transparent network wide. This can let us collaborate now with our counterparts in other LANs/MANs all over the world. All of these things are highly desirable.

The downside as some see it is that use of wormholes negate the need for alternate amateur transports. Perhaps that's true, but the availability of direct dial telephones in some sense negate the need for amateur radio at all. But we still want to do amateur radio, and we still want to do amateur packet. That's because we're in charge of our own network and can tinker with it any way we like. We can't do that with the network of a commercial provider. So I expect people will still be building trunks between the MANs whenever and wherever it makes sense to do so. And I expect people will be experimenting with HF thin nets and plotting to get satellites in orbit. But in the meanwhile, we can use the wireline provider as a utility to fill in the areas where we can't yet do it properly ourselves. If we don't, we'll be doomed to disjoint LANs with much more limited abilities to do the sort of advanced network applications which we could otherwise do. That's very likely to reduce interest in amateur packet to the point where we'll never be able to support any of the expensive amateur radio alternatives to the wireline. And that would be a huge opportunity lost.

Gary  
Gary Coffman KE4ZV | You Make It | Email:  
Destructive Testing Systems | We Break It | ke4zv@bellsouth.net  
534 Shannon Way | Guaranteed | or  
Lawrenceville, GA 30244 | ke4zv@radio.org

---

## 87. Re: [NETSIG:3312] KE4ZV posting

From: Karl Larsen <k5di@acca.nmsu.edu>  
Date: Wed, 25 Jun 1997 06:35:26 -0700  
To: netsig@tapr.org  
Message-ID: <33B11E9E.4F4D@acca.nmsu.edu>  
Rendered body type: text/plain

Steve Stroh wrote:

>  
> I guess I should start calling these "yet another in a series" of gems  
> posted to the rec.radio.amateur.digital.misc newsgroup by Gary KE4ZV.  
>  
> Steve N8GNJ  
> NetSIG Coordinator  
>  
> --  
> Steve Stroh Woodinville, Washington, USA steve@strohpublish.com  
> Please use the Reply-To: address- I'm phasing out my Halcyon account.  
>  
> ----- Forwarded message -----  
> Date: Sat, 21 Jun 1997 23:18:48 GMT  
> From: Gary Coffman <ke4zv@bellsouth.net>

> Newsgroups: rec.radio.amateur.digital.misc  
> Subject: Re: TCP/IP "Logic"  
>  
> On Fri, 20 Jun 1997 12:18:27 -0800, Hank Oredson <hank\_oredson@mentorg.com>  
> wrote:  
>  
> <multiple quoted messages snipped- N8GNJ>  
>  
> >You got our help.  
> >  
> >What should we do?  
>  
> While I doubt Hank is being sincere here, there are a number of things  
> which could be done. But first there must be a realization which may be  
> painful. And that is that we can do some things well via amateur packet  
> radio, but we can't do all things well via amateur packet radio. We should  
snip.....

Gary said better than any I have seen what I believe reality is for packet radio. All that I can add is the "Wonderful BBS Network" I talked about a few years ago.

In networking as Gary points out there is a latency which makes long node links poor. But if you put a BBS at the proper place and let this network do the message duties it will get to the distant points. As things are now many BBS, including mine is using the internet because it is available via a Ham Gateway, and works. I use ham radio to reach the Gateway and to reach other BBS in the immediate area, that being about a ring 100 miles in diameter.

Without the internet we would not have the bulletins that are flooded all over the world. It might be that HF, even in the depths of flux below 70, could handle mail. But this is not fun to me. My area get about 10 mail messages a week. For this I tie up my TS-140 for packet radio. No thanks. I use that radio for other things which give me more pleasure.

It would be nice if someone connected to my node CAB which is 80 miles north of me at 8,000 feet. But there is no large population center out there. It is 230 miles north of my home. To get a path 230 miles long will require a intermediate node on a mountain at a site obtained by someone who gets very little for his effort. All he see's is traffice from going both ways.

I tried to do this once and made several enemies. This is an error I will not repeat...:-)

--  
73, de Karl aka k5di

Karl F. Larsen Box 74, Mesilla Park, NM 88047 (505) 524-3303  
k5di@k5di.cruces.nm.usa.noam k5di@acca.nmsu.edu

---

## 88. G8BPQ "non-verbose" broadcasts?

From: John Ackermann AG9V <jra@febo.com>  
Date: Thu, 26 Jun 1997 08:54:34 -0400  
To: netsig@tapr.org  
Message-ID: <199706261254.IAA07279@meow.febo.com>  
Rendered body type: text/plain

Howdy --

How do you configure G8BPQ so that it operates in "non-verbose" mode on a specified port -- i.e., it broadcasts only its own node information, and not that of any other node it has picked up from the node broadcasts of other stations.

With both xNOS and Linux AX25, it's possible to specify "verbose" on or off to accomplish this, but I don't see any equivalent in BPQ.

This has become a problem on our 19.2kb repeater, where a number of the stations run netrom as endpoints and not switches -- they don't add any new nodes themselves, but they pick up and rebroadcast nodes from the other stations on the repeater. A nasty ping-pong effect can result, with three or four stations advertising nodes that only one of them can actually reach.

Thanks,

John AG9V  
jra@febo.com

---

## 89. Test

From: Steve Stroh <steve@strohpublish.com>  
Date: Sun, 29 Jun 1997 04:42:12 -0700  
To: netsig@tapr.org  
Message-ID: <3.0.1.32.19970629044212.00730094@mail.halcyon.com>  
Rendered body type: text/plain

Test of mailing list. Please discard.

Steve N8GNJ  
NetSIG Coordinator

---

## 90. Regarding BPQ

From: "John Dundas" <J.M.Dundas@btinternet.com>  
Date: Sun, 29 Jun 1997 15:13:51 +0100  
To: <netsig@tapr.org>  
Message-ID: <E0wLjx-0003Bb-00@helium.btinternet.com>  
Rendered body type: text/plain

Hello One and all,

The easy way to stop BPQ from picking up nodes broadcasts on a specified port is to set the minqual to zero. BPQ will still send out nodes broadcasts.

rgds

John Dundas

J.M.Dundas@btinternet.com

Key Radio Systems (Scotland) Ltd      Homepages

<http://www.btinternet.com/~keyradio.scot/>

---

## 91. Re: [NETSIG:3316] Regarding BPQ

From: Burt Lang <burt@roccler.qc.ca>  
Date: Sun, 29 Jun 1997 14:40:17 +0000  
To: netsig@tapr.org  
Message-ID: <33B673D1.51A4@roccler.qc.ca>  
Rendered body type: text/plain

John Ackerman wrote:

How do you configure G8BPQ so that it operates in "non-verbose" mode on a specified port -- i.e., it broadcasts only its own node information, and not that of any other node it has picked up from the node broadcasts of other stations.

With both xNOS and Linux AX25, it's possible to specify "verbose" on or off to accomplish this, but I don't see any equivalent in BPQ.

This has become a problem on our 19.2kb repeater, where a number of the stations run netrom as endpoints and not switches -- they don't add any new nodes themselves, but they pick up and rebroadcast nodes from the other stations on the repeater. A nasty ping-pong effect can result, with three or four stations advertising nodes that only one of them can actually reach.

Thanks,

John AG9V  
jra@febo.com

and John Dundas wrote:

>  
> Hello One and all,  
>  
> The easy way to stop BPQ from picking up nodes broadcasts on a specified  
> port is to set the minqual to  
> zero. BPQ will still send out nodes broadcasts.

```
>
> rgds
>
> John Dundas
>
> J.M.Dundas@btinternet.com
```

Which MINQUAL? There are two different MINQUALs in the BPQCFG file, one in the NETWORK SYSTEM PARAMETERS section and one in the individual PORTS CONFIGURATION section.

MINQUAL in the Network System Parameters sets the "Minimum Quality to add to the Nodes Table". This parameter is generally overridden by the QUALITY parameter in the Ports configuration section. Setting this to zero will effectively prevent any nodes from being entered in the node table only IF QUALITY is omitted from the ports config section (in my understanding).

MINQUAL in the Ports Configuration section limits node broadcasts to nodes having this quality or higher. Setting this to zero will have no effect on the node broadcasts in my understanding of the parameters.

If I understand the original poster, he has a problem with rebroadcasting transient/user nodes that show up on the channel of his repeater and more importantly rebroadcasting node info that these transients/users are propagating. I have studied the BPQ parameters and have posted the results at:

<http://www.cam.org/~burt/neda/bpq-neda.html>

The first 3 notes at the end of the document address this problem starting at URL:

<http://www.cam.org/~burt/neda/bpq-neda.html#note1>

To prevent node information from other node broadcasts being rebroadcast, set QUALADJUST=100 in the ax.25 Port Definition section. This will kill the quality of any node in the node broadcast from this port whose best quality route also comes in ON THE SAME PORT. Use this feature on any port that sees more than one network node such as a diode matrix or a digital repeater. This will still record the transient/user nodes in the nodes table and rebroadcast them (until MINQUAL is set properly) but will not contaminate the node broadcast with trivial route information. Note the key words "ON the Same Port" which means that it will not affect node information coming from other ports on the switch. This parameter is equivalent to the "Alternate Node Broadcast Algorithm" in TheNET X1J4.

To disable all node information EXCEPT the BPQ switch itself from being broadcast, set ax25 port parameter MINQUAL = any number higher than the highest node quality in the node table but less than 255. Note: This will not broadcast any BBS or other server application running on the BPQ switch.

To disable all node broadcasts from a BPQ port, set QUALITY=0 in the ax25 port definition. This will also prevent all L3/L4 connects on this port. This is only appropriate on user ports where NO node information is to be collected or broadcast.

I believe that I have checked out and verified all of these actions in ver 4.08a while preparing the neda web document.

Burt VE2BMQ

---

## 92. re: [NETSIG:3314] G8BPQ "non-verbose" broadcasts?

From: PHallgar@sma.gov.au  
Date: 30 JUN 97 11:14:04 EST  
To: netsig@tapr.org  
Message-ID: <0000iswimiuc.0000hbtjdtl@sma.gov.au>  
Rendered body type: text/plain

C=US/A=INTERNET/DDA=ID/netsig(a)tapr.org Wrote:

```
|
| Howdy --
|
| How do you configure G8BPQ so that it operates in
| "non-verbose" mode on
| a specified port -- i.e., it broadcasts only its own node
| information,
| and not that of any other node it has picked up from the
| node broadcasts
```

```
| of other stations.  
|  
| With both xNOS and Linux AX25, it's possible to specify  
| "verbose" on or off  
| to accomplish this, but I don't see any equivalent in BPQ.  
|  
| This has become a problem on our 19.2kb repeater, where a  
| number of the  
| stations run netrom as endpoints and not switches -- they  
| don't add any  
| new nodes themselves, but they pick up and rebroadcast  
| nodes from the  
| other stations on the repeater. A nasty ping-pong effect  
| can result, with  
| three or four stations advertising nodes that only one of  
| them can actually  
| reach.
```

Just set the two obs values to be the same, the normal config has 5 and 4 put the values the same.... it will receive nodes bnuild a node list but not rebroadcast other nodes but will broadcast itself....

```
|  
| Thanks,  
|  
| John AG9V  
| jra@febo.com  
|  
|
```

73 Peter VK3AVE

---

### 93. Re: [NETSIG:3318] re: G8BPQ "non-verbose" broadcasts?

```
From: "Charles E. Gelm" <gelmce@erinet.com>  
Date: Sun, 29 Jun 1997 22:24:03 -0700  
To: netsig@tapr.org  
Message-ID: <33B742F3.4623@erinet.com>  
Rendered body type: text/plain
```

PHallgar@sma.gov.au wrote:

```
>  
> C=US/A=INTERNET/DDA=ID/netsig(a)tapr.org Wrote:  
> |  
> | Howdy --  
> |  
> | How do you configure G8BPQ so that it operates in  
> | "non-verbose" mode on  
> | a specified port -- i.e., it broadcasts only its own node  
> | information,  
> | and not that of any other node it has picked up from the  
> | node broadcasts  
> | of other stations.
```

Set the port quality to be less than the minimum to broadcast.

Chuck  
[Attachment: T.TXT; text/plain; 298 bytes]

---

### 94. re: G8BPQ "non-verbose" broadcasts?

```
From: "Charles E. Gelm" <gelmce@erinet.com>  
Date: Mon, 30 Jun 1997 08:23:51 -0700  
To: netsig@tapr.org  
Message-ID: <33B7CF87.1952@erinet.com>  
Rendered body type: text/plain
```

If the QUALITY value of all ports are lower than the MINIMUM\_TO\_BROADCAST;  
only itself will broadcast. i.e. In BPQCFG.TXT set:

MINIMUM = 255

```
PORT  
...  
QUALITY = 1  
...  
ENDPORT
```

Chuck  
nc8q





# July 1997

Original source file: netsig.9707

Source: [http://ftp.tapr.org/tapr\\_history/SIG\\_Archives/netsig/mail\\_archive/netsig.9707](http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.9707)

## 1. node stack

From: "Rex H. Ishmael" <rishmael@texhoma.net>  
Date: Wed, 02 Jul 1997 06:53:52  
To: netsig@tapr.org  
Message-ID: <3.0.1.16.19970702065352.3667fa42@texhoma.net>  
Rendered body type: text/plain

Some time back there was identified a problem with the earlier versions of tiny 2 tnc's that a capacitor was installed incorrectly.. is this also a problem in the early Micro -2 tnc's?... I have a pair that seem to work fine for awhile then just lock up.. no reason has been found for this as yet can anyone re-submit that early information or give ideas on curing my problem..

Rex

=====  
Rex Ishmael, Sr. Environmental Engineer, Halliburton Energy Services  
E-Mail:rishmael@halnet.com (work)  
E-Mail:rishmael@texhoma.net (home)  
Amateur Mail: WD0AJG@WD0AJG.#SCOK.OK.USA.NOAM  
=====

---

## 2. Re: [NETSIG:3321] node stack

From: Burt Lang <burt@roccler.qc.ca>  
Date: Wed, 02 Jul 1997 10:32:55 -3100  
To: netsig@tapr.org  
Message-ID: <33A42747.772A@roccler.qc.ca>  
Rendered body type: text/plain

Rex H. Ishmael wrote:

>  
> Some time back there was identified a problem with the earlier versions of  
> tiny 2 tnc's  
> that a capacitor was installed incorrectly.. is this also a problem in the  
> early Micro -2  
> tnc's?... I have a pair that seem to work fine for awhile then just lock  
> up.. no reason has  
> been found for this as yet can anyone re-submit that early information or  
> give ideas on  
> curing my problem..  
>  
> Rex

The Micropower used the same boards as the tiny-2 so the same problem should be present. You can check out the Paccomm web site at [www.paccomm.com](http://www.paccomm.com) and look for "service bulletins" or you can look at the web page written by the guy that found the problem and announced it to the world when Paccomm refused to reveal what they knew for some time. URL is <http://www.cam.org/~burt/neda/tiny2mk2.html>

Good luck.

Burt VE2BMQ

---

## 3. Fwd: [NETSIG:3054] Tiny-2 MK2 defect

From: dholland@cclandjop.com (Dale Holland)  
Date: Wed, 02 Jul 97 11:37:28 -0500  
To: netsig mailing list <netsig@tapr.org>  
Message-ID: <19970702103802857.AAA151@[206.102.184.171]>  
Rendered body type: text/plain

-- [ From: Dale Holland \* EMC.Ver #2.5.02 ] --

Rex Ishmael said:

"Some time back there was identified a problem with the earlier versions of tiny 2 tnc's that a capacitor was installed incorrectly.. is this also a problem in the early Micro -2 tnc's?... I have a pair that seem to work fine for awhile then just lock

up.. no reason has  
been found for this as yet can anyone re-submit that early information or  
give ideas on  
curing my problem.."

Rex, I think this is the data you are looking for:

----- FORWARD, Original message follows -----

> Date: Wednesday, 15-Jan-97 08:15 PM  
>  
> From: burt lang \ Internet: (burt@roccler.qc.ca)  
> To: netsig@tapr.org \ Internet: (netsig@tapr.org)  
>  
> Subject: [NETSIG:3054] Tiny-2 MK2 defect  
>  
> Hi Folks.  
>  
> During the repair of a number of PacComm Tiny-2 TNCs that were damaged by  
> lightning, a manufacturing/design defect on the Tiny-2 MK2 model was  
> discovered.  
>  
> It would appear that EVERY PacComm Tiny-2 MK2 ever made has an  
electrolytic  
> capacitor installed backwards. C23 is installed with the positive  
terminal  
> connected to pin 6 on the MAX232. However pin 6 on the MAX232 is the  
NEGATIVE  
> supply filter and output terminal with a typical voltage of -10v. If this  
> capacitor fails, the charge pump voltage generation circuitry is loaded  
down  
> and your serial port fails or locks up (or both). The only reason I can  
see  
> that it has not been noticed before this is that PacComm have been  
generally  
> using 25 volt electrolytics in this spot and they have been able to  
tolerate  
> the reverse polarity under most normal circumstances.  
>  
> The TNCs I was working on ranged from early production units with PCB ver  
1.7  
> (SN 12,xxx) to pretty recent boards with ver 1.81 (SN 18,6xx) which had  
been  
> stressed with lightning and it was during the troubleshooting procedure  
that my  
> assistant started to ask why the board and the schematic did not match.  
>  
> The schematic is correct and the board copper traces are fine if the  
capacitor  
> is reversed (unless you consider that a square pad denotes the positive  
> terminal). The only mistake the designer made was on the component layout  
> screen printing where the polarity marking was reversed. Of course the  
board  
> stuffers simply follow the board markings when the components are  
installed.  
>  
> PacComm has been already advised by e-mail to their trouble reporting  
address.  
> I am attaching a copy of the confirmation message received from their  
> automatic server. At the time this message is being composed, I have not  
> received any response from PacComm ( I allowed 2 working days before  
posting  
> this notice).  
>  
> Recommended action:  
>  
> This defect poses only a potential failure problem. If your TNC is  
working,  
> you do not need to immediately change the capacitor. Schedule a change  
for the  
> next time you have the unit open.  
>  
> For network/node operators:  
> Examine your own node stacks when next servicing the node stack and  
replace C23  
> with a new unit (no telling what damage the existing unit has suffered  
with

> continued application of reversed voltage - although the units we switched  
 > around (we did not have replacements readily available) seemed to work  
 > reasonably well). The replacement must be installed with the positive  
 terminal  
 > in the hole nearest C33 (negative lead in the hole marked + ). A dipped  
 > tantalum cap might be a better replacement.  
 >  
 > Note: Some of the problems that I reported some years ago regarding low  
 drive  
 > and lockup of the serial ports with certain brands of serial port ICs may  
 have  
 > in fact been aggravated by this problem. I know of at least two stacks  
 > recently that have suffered similar problems with lockups.  
 >  
 > Let's not dump on PacComm on this issue. Even the best manufacturers can  
 have  
 > errors slip thru their design and testing procedure. We don't want  
 another AEA  
 > - NetRom compatible TNCs are getting hard enough to find and we don't want  
 a  
 > monopoly by one remaining manufacturer. What we should expect from a  
 > responsible company is correction of their current production ASAP and a  
 timely  
 > advisory notice to owners outlining the problem and how it can be  
 corrected.  
 >  
 > Any Comments???  
 >  
 > Burt>>>  
 >  
 >  
 >  
 > \*\*\*\*\*  
 > (response from PacComm trouble report server)  
 >  
 > Subject:  
 >     Receipt confirmation of Hardware Report 1071  
 >     Date:  
 >         Sun,12 Jan 97 11:00:47 EST  
 >     From:  
 >         reporter@paccomm.com  
 >     To:  
 >         burt@roccler.qc.ca  
 >  
 >  
 > Number: PR-1071  
 >  
 > \_\_\_\_\_  
 > SUBMITTER:  
 >  
 >         Name: Burt Lang  
 >         Callsign: VE2BMQ  
 >         Phone: (514)825-2597  
 >         FAX:  
 > REPLY     E-MAIL: burt@roccler.qc.ca  
 >  
 >  
 >  
 > Product: Tiny-2 Mk-2  
 > Release: rev 1.7 & 1.81  
 >     Date:  
 >  
 >  
 >  
 > SYNOPSIS:  
 >  
 >  
 >     Manufacturing/design defect in Tiny-2 MK2  
 >  
 >  
 >  
 > DESCRIPTION:  
 >  
 >  
 >     You have a serious problem  
 >  
 >  
 >  
 > Electrolytic capacitor C23 is installed with incorrect polarity on all  
 Tiny-2

> MK2 boards I have examined. The error is in the component marking screen  
> printing on the board which obviously the installers used when orienting  
the  
> parts on the board.  
>  
>  
>  
> If you examine the board very carefully, you will find that the positive  
> terminal of C23 goes to pin 6 on the MAX232 chip. However pin 6 on the  
MAX232  
> is the NEGATIVE polarity power supply filter point and output terminal and  
> requires connection to the negative terminal of the capacitor.  
>  
>  
> The schematic is correct as is the copper traces on the board.  
>  
>  
> The problems arise when this capacitor starts to leak excessively and  
loads  
> down the power supply circuitry in the MAX232. The serial port will then  
fail  
> and may also lock up.  
>  
> How come this was not noticed before this? Well probably because you have  
been  
> using 25 volt units (instead of the 10v units specified in the schematic)  
and  
> they tolerated reverse polarity at least long enough for the units to past  
> inspection and during normal operation in the field. Users probably  
attributed  
> occasional failures to other causes.  
>  
>  
> Recommended correction (on units already out in the field): Replace this  
> capacitor with a new one installed with the polarity reversed to that  
shown on  
> the board screening. I do not expect you to offer to correct them but I  
would  
> expect you to issue an advisory notice to owners to warn them of the  
problem.  
> I would also expect you to correct your production on future units asap.  
>  
>  
> Again I must emphasize that you generally make good products but bugs can  
be  
> hidden in even the best of equipment.  
>  
>  
>  
> HOW TO REPEAT PROBLEM:  
>  
>  
> Thank you for your interest in PacComm products.  
>  
PacComm  
>  
>  
> \*\*\*\*\*  
>

----- FORWARD, End of original message -----

#### 4. need help

From: Aureusgrp@aol.com (by way of Greg Jones, WD5IVD)  
Date: Wed, 2 Jul 1997 19:08:32 -0500  
To: "NETSIG list mailing" <netsig@tapr.org>,  
" Spread Spectrum " <ss@tapr.org>,  
" HF SIG list mailing " <hfsig@tapr.org>  
Message-ID: <v03020912afe09dde0102@[208.134.134.40]>  
Rendered body type: text/plain

For those that might be interested.

Greg

-----

Hi. We're specialized recruiters and could really use you help. A client of  
ours has a high profile DAMA program and has a critical need for one or more  
DAMA engineers. These are exciting positions in design, development, and

systems integration. Knowledge of appropriate mil-stds is part of the picture too. Who do you know that I can talk to? Thank you so much for any help you can give us. Nancy Ulbert, CPC aureusgrp@aol.com or 800-289-4044.

---

## 5. Re: need help

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>  
Date: Thu, 3 Jul 1997 00:13:02 -0500  
To: ss@tapr.org  
Cc: "HF SIG list mailing" <hfsig@tapr.org>,  
"NETSIG list mailing" <netsig@tapr.org>  
Message-ID: <v0302090aafe0e51dc2bd@[208.134.134.40]>  
Rendered body type: text/plain

Thanks for letting us know Lyle. Hopefully someone will make sure that TAPR gets the finders fee if they respond. I know we could sure use it.

I sure didn't know.

Cheers - Greg

>At 07:20 PM 7/2/97 -0500, you wrote:  
>>For those that might be interested.  
>>  
>>Greg  
>>  
>>-----  
>>  
>>Hi. We're specialized recruiters and could really use you help. A client of  
>>ours has a high profile DAMA program and has a critical need for one or more  
>>DAMA engineers. These are exciting positions in design, development, and  
>>systems integration. Knowledge of appropriate mil-stds is part of the picture  
>>too. Who do you know that I can talk to? Thank you so much for any help you  
>>can give us. Nancy Ulbert, CPC aureusgrp@aol.com or 800-289-4044.  
>>  
>Greg,  
>  
>These guys get big bucks to recruit, so if anyone repsonds, through this  
>message, please inform the recruiter that 25% of his fee goes to TAPR or  
>you don't take the job :-)  
>  
>(The fees are often 40% to 60% of the annual compensation of the person  
>recruited - I know, we just went through one to get a person we needed...)  
>  
>Cheers,  
>  
>Lyle

-----  
Greg Jones, WD5IVD  
Austin, Texas  
wd5ivd@tapr.org  
<http://www.tapr.org/~wd5ivd>  
-----

---

## 6. Re: [NETSIG:3324] need help

From: "Thomas A. Moulton" <w2vy@gte.net>  
Date: Thu, 03 Jul 1997 07:17:03 -0500  
To: netsig@tapr.org  
Message-ID: <33BB9838.154DE978@gte.net>  
Rendered body type: text/plain

Greg,

Thanks for the pointer! I have been looking for a job pretty intensely over the past few weeks. If anyone else knows of anything please let me know directly.

I am particularly interested in telecommuting, if possible...

My resume is at <http://home1.gte.net/w2vy/resume.htm>

thanks

-----  
Thomas A. Moulton, W2VY  
ROSE X.25 Packet Switch <http://www.rats.org/rose>  
Need Cosmetics? <http://home1.gte.net/w2vy/marykay.htm>

## 7. [NETSIG:3326] Re: need help

From: Howard Goldstein <hg@penny.n2wx.ampr.org>  
Date: Thu, 3 Jul 1997 08:00:48 -0400  
To: netsig@tapr.org  
Message-ID: <199707031200.IAA03529@penny.n2wx.ampr.org>  
Rendered body type: text/plain

Thomas A. Moulton writes:

> Greg,  
>  
> Thanks for the pointer! I have been looking for a job pretty intensely  
> over the past few weeks. If anyone else knows of anything please let me  
> know directly.  
>

Have you been looking in fl.jobs.\* ?

I saw something in there just now for X.25 folks in Tampa (kind of brings back old memories)

---

## 8. Re: [NETSIG:3327] Re: need help

From: "Thomas A. Moulton" <w2vy@gte.net>  
Date: Fri, 04 Jul 1997 08:53:48 -0500  
To: netsig@tapr.org  
Message-ID: <33BD005C.449FC302@gte.net>  
Rendered body type: text/plain

No I hadn't...

Doesn't matter, I've got one now, I start Monday...

Green Hills Software... (makes compilers and tools for embedded systems...)

--

-----  
Thomas A. Moulton, W2VY  
ROSE X.25 Packet Switch <http://www.rats.org/rose>  
Need Cosmetics? <http://home1.gte.net/w2vy/marykay.htm>

---

## 9. What speed to use to LAN? (your opinion)

From: "(SV2AGW) George Rossopoylos" <sv2agw@the.forthnet.gr>  
Date: Tue, 8 Jul 1997 19:03:24 +0300  
To: <netsig@tapr.org>  
Message-ID: <199707081608.TAA16785@nefeli.forthnet.gr>  
Rendered body type: text/plain

Hi All

I think that this is the appropriate sig to discuss it.  
I want to set the follow LAN. A server and 4 to 10 clients.  
We dont care for the software, could be anything but to have something real  
to deal with it will be a FBB bbs and 4 (for the moment) users.  
The geographical site is as follow

o(SV2AGW)

o(SV2BB0)

0 (bbs)

o(SV2RQ)

o(SV2DFK)

As you can see all the users are EAST from BBS and the angle is about 45-60o.

We decide to use the 19.2kbauds. We shall use tncs2 compatibles in 10Mhz and G3RUH modems, the transeveirs will be the TEKK (5W) for 19.2kb.

This is the easiest solution because we have ready the trcvr.  
But we are not satisfied with the speed we need more!! We can use the same tncs and modems for higher speed but what about trcvr. We dont care for the frequency, and the distance between the BBS and the users is about 1or2km.User from user is less in the range of 500m to 1km.

I need your opinion and suggestions to solve the problem. I could build trcvrs but only if they are in a Kit form(to difficult to locate components).  
What do you think??

(SV2AGW) George Rossopoulos  
e-mail:sv2agw@the.forthet.gr  
packet:SV2AGW@SV2DXC.TSL.GRC.EU  
http://www.forthnet.gr/sv2agw/  
http://www.intranet.gr/isefi/rossopou/rossopou.htm

---

## 10. Re: [NETSIG:3329] What speed to use to LAN? (your opinion)

From: jeff@mich.com  
Date: Tue, 08 Jul 1997 15:26:26 -0400  
To: netsig@tapr.org, sv2agw@the.forthet.gr  
Message-ID: <2.2.32.19970708192626.00ac4350@mail.mich.com>  
Rendered body type: text/plain

At 11:11 AM 7/8/97 -0500, (SV2AGW) George Rossopoylos wrote:  
>  
>We decide to use the 19.2kbuds. We shall use tncs2 compatibles in 10Mhz  
>and G3RUH modems, the tranceveirs will be the TEKK (5W) for 19.2kb.  
>  
>This is the easiest solution because we have ready the trcvr.  
>But we are not satisfied with the speed we need more!! We can use the same  
>tncs and modems for higher speed but what about trcvr. We dont care for the  
>frequency, and the distance between the BBS and the users is about  
>1or2km.User from user is less in the range of 500m to 1km.  
>  
>I need your opinion and suggestions to solve the problem. I could build  
>trcvrs but only if they are in a Kit form(to difficult to locate  
>components).  
>What do you think??  
>

Is 1megabit per second to slow? Go buy some WaveLan boards. Check  
out [www.wavelan.com](http://www.wavelan.com). About \$500 U.S. and will easily cover the  
distance you want. 900mhz or 2.45ghz available and LINUX driver  
is available.

You then can sell you tnc's and radios and recover most (or all)  
of the cost of the WaveLan's.

Regards,

-----  
| Jeff King        Aero Data Systems |  
| jeff@mich.com   P.O. Box 510895   |  
| (810)471-1787   Livonia, MI 48151 |  
| F(810)471-0279   United States    |  
-----

## 11. Re: [NETSIG:3329] What speed to use to LAN? (your opinion)

From: Ulf.Kumm@t-online.de (Ulf Kumm)  
Date: Wed, 09 Jul 1997 12:30:02 -0700  
To: netsig@tapr.org  
Message-ID: <33C3E6BA.60A7@t-online.de>  
Rendered body type: text/plain

(SV2AGW) George Rossopoylos wrote:  
...  
> We decide to use the 19.2kbuds.

Why not faster?

> the tranceveirs will be the TEKK (5W) for 19.2kb.

You should use a directional antenna, e.g. 3-el Yagi, HB9CV or Quads.  
If you decide to use microwave, the server should have a low gain horn  
antenna and the users should use tv-dishes.

I have developed transceivers for 430 MHz with a AF-bandwidth  
of 20 and 180 kHz (= 19k2 and 153kBaud), they are still in the  
prototype state. I expect them to be available end of '97.

I have seen that it is not easy to realise such wideband trans-  
mitters and receivers, the design differs significantly from the  
well known 'audio-speech' transceivers.

I could test the xcvs successfully on 153kBaud (with a TNC35  
high speed packet-controller).

> We shall use tncs2 compatibles in 10Mhz and G3RUH modems,

About your highspeed plans:

As you might know, there exists a highspeed AX.25 link on 10 GHz (20 mW, Dish Antenna, 30km distance) with 1,2 MBaud, in operation since 1996 near Stuttgart. Of cause, the generation of such high speed AX.25 data streams is limited to high speed RISC TNCs as TNC3. The TNC3 include a High-Speed G3RUH modem.

In Addition, the TNC3 has Hayes-compatible command sets and can be used in SLIP-mode for simple TCP/IP operation. There are some TCP/IP servers accessible in Germany, which run a TNC3 between radio and Server. For TCP/IP, it is no more necessary to use KISS on the host to process all received data.

For more specific info, just eMail me directly.

--

Ulf Kumm, DK9SJ, D-70597 Stuttgart, Johannes-Kraemer-Str. 34  
eMail: Ulf.Kumm@t-online.de Phone: +49 711 7678-925 Fax: -924  
Internet home: <http://home.t-online.de/home/Ulf.Kumm/main.htm>

---

## 12. G8BPQ ip routing

From: Bob Nielsen <nielsen@primenet.com>  
Date: Wed, 16 Jul 1997 18:47:09 -0700 (MST)  
To: netsig@tapr.org  
Message-ID: <Pine.LNX.3.96.970716184506.1440B-100000@nielsen.tus.primenet.com>  
Rendered body type: text/plain

We recently converted a local BPQ mountaintop node to use the switch.exe version with ip routing. There seem to be a few problems we can't explain. Are there any known problems with BPQ as a router?

Bob

----

|             |                                                                                 |
|-------------|---------------------------------------------------------------------------------|
| Bob Nielsen | Internet: <a href="mailto:nielsen@primenet.com">nielsen@primenet.com</a>        |
| Tucson, AZ  | AMPRnet: <a href="mailto:w6swe@w6swe.ampr.org">w6swe@w6swe.ampr.org</a>         |
|             | AX.25: <a href="mailto:w6swe@wb7tls.az.usa.noam">w6swe@wb7tls.az.usa.noam</a>   |
|             | <a href="http://www.primenet.com/~nielsen">http://www.primenet.com/~nielsen</a> |

---



# August 1997

Original source file: netsig.9708

Source: [http://ftp.tapr.org/tapr\\_history/SIG\\_Archives/netsig/mail\\_archive/netsig.9708](http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.9708)

## 1. drsi pcpa

From: "Rex H. Ishmael" <rishmael@texhoma.net>  
Date: Mon, 04 Aug 1997 22:33:33 -0500  
To: netsig@tapr.org  
Message-ID: <3.0.2.32.19970804223333.0068d9d8@texhoma.net>  
Rendered body type: text/plain

Anyone.. I need the dip switch setting for the pcpa-2  
how do I set for 300 and 310 and what irq's  
can I set it at and how.. needing 5 but if 7 will not  
conflict with printer then maybe?

REX

---

## 2. RE: [NETSIG:3333] drsi pcpa

From: Daniel Meredith <dmeredith@phx-az.ampr.org>  
Date: Tue, 5 Aug 1997 00:20:28 -0700  
To: "'netsig@tapr.org'" <netsig@tapr.org>  
Message-ID: <01BCA135.613A98A0@dmeredith@phx-az.ampr.org>  
Rendered body type: text/plain

On Monday, August 04, 1997 8:38 PM, Rex H. Ishmael [SMTP:rishmael@texhoma.net] wrote:

> Anyone.. I need the dip switch setting for the pcpa-2  
> how do I set for 300 and 310 and what irq's  
> can I set it at and how.. needing 5 but if 7 will not  
> conflict with printer then maybe?  
>  
> REX  
>

Range 300H-307H - SW 1 OFF  
Range 310H-317H - SW 1 ON

IRQ 2 = SW 3 ON  
IRQ 3 = SW 4 ON  
IRQ 4 = SW 5 ON  
IRQ 5 = SW 6 ON  
IRQ 6 = SW 7 ON  
IRQ 7 = SW 8 ON

I have used 2 DRSI type 2 cards on 1 machine all using IRQ7 with no problems...

Daniel

---

## 3. Unsubscribe

From: "E20EHQ <Kanok Nakchum>" <tc4020@tcom.ritnb.ac.th>  
Date: Wed, 6 Aug 1997 12:41:52 -0700 (GMT)  
To: netsig@tapr.org  
Message-ID: <Pine.GS0.3.96.970806124008.18953A-100000@tcom.ritnb.ac.th>  
Rendered body type: text/plain

Dear Sir,  
Please unsubsrib me.

ntinawat@netserv.chula.ac.th  
e20ehq@amsat.org

---

## 4. TNC

From: Robert Wood <w5robert@blkbox.com>  
Date: Wed, 6 Aug 1997 16:21:03 -0500 (CDT)  
To: netsig@tapr.org  
Message-ID: <199708062121.QAA05060@blkbox.com>  
Rendered body type: text/plain

One problem with RF nets is:  
buy TNC  
buy 9600 baud add on modem.  
buy radio good for High Speed.

Just addressing the 9600 baud modem (or faster), it's cheaper to  
buy a telephone 33K baud modem then what we pay for a 9600 baud modem for

RF service. What am I missing here?  
--  
73 Robert W5AJ w5robert@blkbbox.com

## 5. Re: [NETSIG:3336] TNC

From: jack swift <jswift@up.net>  
Date: Wed, 06 Aug 1997 19:17:37 -0500  
To: netsig@tapr.org  
Message-ID: <199708062316.TAA03720@btc1.up.net>  
Rendered body type: text/plain

someone said "it's a hobby"... but for some that isn't really enough. when the power and phone lines drop and you volunteer to work in a red cross shelter, it's nice to be able to fire up your portable packet station and send all those 'missing and found people' lists..

besides - "he who dies with the most toys, wins." (for lack of a better excuse to give my wife who has 15 pairs of shoes and 17 handbags that don't match the shoes...)

At 04:29 PM EST 8/6/97 -0500, you wrote:

>One problem with RF nets is:

```
>buy TNC
```

```
>buy 9600 baud add on modem.
```

>buy radio good for High Speed.

>

>Just addressing the 9600 baud modem (or faster), it's cheaper to

```
>buy a telephone 33K baud modem then what we pay for a 9600 baud modem for
```

```
>RF service.    What am I missing here?
```

> - -

```
>73 Robert W5AJ w5robert@blkbox.com
```

>

>

>

Jack Swift jswift@up.net N8WAV@W8YY.#UPMI.MI.USA.NA 47.119N 88.572W  
Swift True Value Hardware 402 Sheldon Ave. Houghton, MI 49931  
906-482-0530, 0531, 7766 Alpha Phi Omega Epsilon Lambda Chapter Advisor  
Houghton County Amateur Radio Emergency Service Dereliction IS!

## 6. TheNet Nodestack Crosstie Delay ??

From: Mike Fahmie <MPFahmie@lbl.gov>  
Date: Fri, 08 Aug 1997 14:06:49 -0700  
To: netsig@tapr.org  
Message-ID: <199708082107.0AA29945@mh1.lbl.gov>  
Rendered body type: text/plain

Does anyone know how much time delay can be tolerated between two TNC-2 units running TheNet? I am referring to the RS-232 crosstie between two nodes in a stack. I am considering such a connection utilizing a transparent RS-232 extension medium that may have as much as a 1/2 second propagation delay (not unlike a satellite link).

I suspect that the delay is not a problem unless more than 2 nodes are involved, but that's just a gut feeling. Anyone know for sure ??

-Mike-

Mike Fahmie - Advanced Light Source  
Lawrence Berkeley National Laboratory  
(510) 486-4030 - MPFahmie@lbl.gov  
WA6ZTY @ N6EEG

## 7. Re: [NETSIG:3338] TheNet Nodestack Crosstie Delay ??

From: Karl Larsen <k5di@acca.nmsu.edu>  
Date: Fri, 08 Aug 1997 17:10:36 -0700  
To: netsig@tapr.org  
Message-ID: <33EBB57C.4CD2@acca.nmsu.edu>  
Rendered body type: text/plain

Mike Fahmie wrote:

>

> Does anyone know how much time delay can be tolerated between two TNC-2

> units running TheNet? I am referring to the RS-232 crosstie between two

> nodes in a stack. I am considering such a connection utilizing a

> transparent RS-232 extension medium that may have as much as a 1/2 second

> propagation delay (not unlike a satellite link).  
>  
> I suspect that the delay is not a problem unless more than 2 nodes are  
> involved, but that's just a gut feeling. Anyone know for sure ??  
>  
> -Mike-  
>  
> Mike Fahmie - Advanced Light Source  
> Lawrence Berkeley National Laboratory  
> (510) 486-4030 - MPFahmie@lbl.gov  
> WA6ZTY @ N6EEG

Hi Mike,

I am not sure what kind of delay your talking about. I think any delay will be ok since the receiving tnc will need to get the entire packet before processing it. RS-232 has no time dependant functions so you can clock it out very slow I think.

--  
73, de Karl aka k5di

Karl F. Larsen Box 74, Mesilla Park, NM 88047 (505) 524-3303  
k5di@k5di.cruces.nm.usa.noam k5di@acca.nmsu.edu

---

## 8. Re: [NETSIG:3339] Re: TheNet Nodestack Crosstie Delay ??

From: Mike Fahmie <MPFahmie@lbl.gov>  
Date: Fri, 08 Aug 1997 17:59:12 -0700  
To: netsig@tapr.org  
Message-ID: <199708090100.SAA10449@mh1.lbl.gov>  
Rendered body type: text/plain

>Mike Fahmie wrote:  
>>  
>> Does anyone know how much time delay can be tolerated between two TNC-2  
>> units running TheNet? I am referring to the RS-232 crosstie between two  
>> nodes in a stack. I am considering such a connection utilizing a  
>> transparent RS-232 extension medium that may have as much as a 1/2 second  
>> propagation delay (not unlike a satellite link).  
>>  
>> I suspect that the delay is not a problem unless more than 2 nodes are  
>> involved, but that's just a gut feeling. Anyone know for sure ??  
>>  
>> -Mike-  
>  
>Hi Mike,  
>  
>I am not sure what kind of delay your talking about. I think any delay  
>will be ok since the receiving tnc will need to get the entire packet  
>before processing it. RS-232 has no time dependant functions so you can  
>clock it out very slow I think.  
>--  
>73, de Karl aka k5di  
>

Karl,

If TNC #1 sends something to TNC #2 via the RS-232 jumper (nodestack jumper), and if TNC #2 has to ack it (I don't know the crosstie protocol), there will be a 1/2 second delay each way for a total of 1 second before TNC #1 receives its ack. Does TheNet have a mechanism that might cause it to time out waiting for the ack? I guess that that is the heart of the question.

I don't know if TheNet even sends acks back to the companion TNC, if not, then the propagation delay may be unimportant.

I will be off on vacation till next week and will be unable to respond to any further comments on my question until I return, but I will see them at that time.

Tnx,  
Mike

Mike Fahmie - WA6ZTY @ N6EEG - MPFahmie@lbl.gov  
Advanced Light Source - Lawrence Berkeley National Laboratory  
=====  
"Alas, a Balrog, and I am already weary."  
Gandalf the Wizard - Lord of the Rings

=====

## 9. TAPR Server to be down 8/9/97

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>  
Date: Fri, 8 Aug 1997 22:24:44 -0500  
To: "TAPR-BB list mailing" <tapr-bb@tapr.org>,  
"TAPR APRS SIG" <aprssig@tapr.org>,  
"HF SIG list mailing" <hfsig@tapr.org>,  
"NETSIG list mailing" <netsig@tapr.org>,  
"BBS SIG list mailing" <bbssig@tapr.org>,  
"Spread Spectrum" <ss@tapr.org>, "TAPR SYS" <tapr-sys@tapr.org>,  
"tapr-tnc" <tapr-tnc@tapr.org>, aprs-fl@tapr.org,  
"tacgps" <tacgps@tapr.org>,  
TAPR Regional Freq <regional\_freq@tapr.org>,  
"TAPR/AMSAT DSP" <dsp@tapr.org>, "DSP-93 Build" <dsp-93@tapr.org>,  
"TPRS Board" <tpsr-board@tapr.org>  
Message-ID: <v03020900b01191cb3c5c@[208.134.134.40]>  
Rendered body type: text/plain

I just received a call informing us that the building location where the TAPR.ORG server is located will be without power tomorrow for most of the day.

We will be shutting down the server between 7am and 8am and don't expect that it will be available until late Saturday evening when power is restored.

Cheers - Greg, WD5IVD

-----  
Greg Jones, WD5IVD  
Austin, Texas  
wd5ivd@tapr.org  
<http://www.tapr.org/~wd5ivd>  
-----

"Before you become too entranced with gorgeous gadgets  
and mesmerizing video displays, let me remind you that  
information is not knowledge, knowledge is not wisdom,  
and wisdom is not foresight. Each grows out of the other  
and we need them all."  
-Arthur C. Clarke

## 10. Re: [NETSIG:3340] Re: TheNet Nodestack Crosstie Delay ??

From: Burt Lang <burt@roccler.qc.ca>  
Date: Sat, 09 Aug 1997 00:25:16 -0400  
To: netsig@tapr.org, MPFahmie@lbl.gov  
Message-ID: <33EBF12C.77AB@roccler.qc.ca>  
Rendered body type: text/plain

Mike Fahmie wrote:  
>  
> >Mike Fahmie wrote:  
> >>  
> >> Does anyone know how much time delay can be tolerated between two TNC-2  
> >> units running TheNet? I am referring to the RS-232 crosstie between two  
> >> nodes in a stack. I am considering such a connection utilizing a  
> >> transparent RS-232 extension medium that may have as much as a 1/2 second  
> >> propagation delay (not unlike a satellite link).  
> >>  
> >> I suspect that the delay is not a problem unless more than 2 nodes are  
> >> involved, but that's just a gut feeling. Anyone know for sure ??  
> >>  
> >> -Mike-  
> >  
> >Hi Mike,  
> >  
> >I am not sure what kind of delay your talking about. I think any delay  
> >will be ok since the receiving tnc will need to get the entire packet  
> >before processing it. RS-232 has no time dependant functions so you can  
> >clock it out very slow I think.  
> >--  
> >73, de Karl aka k5di  
> >  
> >  
> Karl,  
> >  
> >If TNC #1 sends something to TNC #2 via the RS-232 jumper (nodestack  
> >jumper), and if TNC #2 has to ack it (I don't know the crosstie protocol),  
> >there will be a 1/2 second delay each way for a total of 1 second before TNC

> #1 receives its ack. Does TheNet have a mechanism that might cause it to  
 > time out waiting for the ack? I guess that that is the heart of the question.  
 >  
 > I don't know if TheNet even sends acks back to the companion TNC, if not,  
 > then the propagation delay may be unimportant.  
 >  
 > I will be off on vacation till next week and will be unable to respond to  
 > any further comments on my question until I return, but I will see them at  
 > that time.  
 >  
 > Tnx,  
 > Mike  
 >  
 > Mike Fahmie - WA6ZTY @ N6EEG - MPFahmie@lbl.gov

Actually the crosslink protocol (on X1J at least) does require ACKs and does have timing parameters. Unfortunately the serial port parameters do not appear to be adjustable. The relevant parameters would be:

Serial FRACK = 1 sec  
 Serial RETRYs = 9  
 Serial RESPTIME = 0

Here is what happens if you send a frame across the matrix. The originating TNC sends the frame. If it does not receive an ACK before a random multiple of 1 second, then it will resend the frame or a poll packet (not sure which - this is very important as it will affect the end result). It will continue to send the retry frame until it either times out at the serial RETRY parameter (9 retries for a total of 10 frames sent across the matrix) or it receives a belated ACK. The time between retries seems to be a random multiple of 1 second - in a short test I saw delays of up to 5 seconds or more.

Re: the importance of whether the retry is an original frame or a poll packet. If it is an original frame then there is no problem. When it receives the ACK it will simply send another frame. Resulting communication is rather slow but it works. If on the other hand the retry frame is a poll packet, when it does receive an ack, it will respond with the original frame. If there is a delay in this one also, another poll packet is sent and the process repeats - often. Result almost total shutdown of the serial connection. If you really want to know what it is, I can drag out a HP-1640 RS-232 logic analyzer I have and test it.

The above results were obtained in a simple test on my own node matrix which is equiped with a matrix monitor circuit to observe action on the matrix. One of the TNCs was disconnected and a connect request sent to it. Radio port parameters were varied to confirm that they had no effect on the serial port parameters. The matrix was operating at 9600 bps (mainly because there were a mix of TNC-2 and Tiny-2 TNCs on it.

There is one possible option that you may want to investigate. Kantronics is marketing a firmware version of G8BPQ code called K-NET for their KPC-3 and KPC-9612. I know that the regular PC based software BPQ version has complete control over the parameters on all ports including the netrom matrix port. It is possible that the firmware version does also. I understand that a K-NET equipped TNC is compatible with the TheNET Node Matrix. I do not have any personal experience with that combination so cannot verify the info.

Burt VE2BMQ>>>

## 11. Re: [NETSIG:3342] Re: TheNet Nodestack Crosstie Delay ??

From: "Charles E. Gelm" <gelmce@erinet.com>  
 Date: Sat, 09 Aug 1997 07:57:48 -0700  
 To: netsig@tapr.org  
 Message-ID: <33EC856C.2844@erinet.com>  
 Rendered body type: text/plain

>  
 > Re: the importance of whether the retry is an original frame or a poll  
 > packet. If it is an original frame then there is no problem. When it  
 > receives the ACK it will simply send another frame. Resulting  
 > communication is rather slow but it works. If on the other hand the  
 > retry frame is a poll packet, when it does receive an ack, it will  
 > respond with the original frame. If there is a delay in this one also,  
 > another poll packet is sent and the process repeats - often. Result  
 > almost total shutdown of the serial connection. If you really want to  
 > know what it is, I can drag out a HP-1640 RS-232 logic analyzer I have

> and test it.  
> snip  
>  
> Burt VE2BMQ>>>

Uh, I thot that in AX.25 level 2, if the poll frame received an Ack then the next frame was sent; if it received a Nak, the frame was resent. I thot the theory behind the poll frame was that the receiver did receive the frame okay only that the Ack got lost on the way back.

Chuck

---

## 12. Re: TheNet Nodestack Crosstie Delay ??

From: Don Lemke <wb9mjn@wb9mjn.ampr.org>  
Date: Sun, 10 Aug 1997 13:03:24 -0500  
To: netsig@tapr.org  
Cc: MPFahmie@lbl.gov  
Message-ID: <33EE026C.42FD@wb9mjn.ampr.org>  
Rendered body type: text/plain

Hi Mike,

Regarding:

> Does anyone know how much time delay can be tolerated between two TNC-2  
> units running TheNet? I am referring to the RS-232 crosstie between two  
> nodes in a stack. I am considering such a connection utilizing a  
> transparent RS-232 extension medium that may have as much as a 1/2 second  
> propagation delay (not unlike a satellite link).  
>  
> I suspect that the delay is not a problem unless more than 2 nodes are  
> involved, but that's just a gut feeling. Anyone know for sure ??  
>  
> -Mike-

We do a similar thing with our wormhole provided by MICOM and Orv Beach.

On both ends of a dedicated 56 KB data wire, there are Micom Statistical Multiplexors, with 8 9600 baud ports. Our 9600 baud 1.2 Ghz data radio, is connected to a KISS TNC2. The TNC2 is connected to one of the ports of the Stat Mux. On the Simi Valley, CA side, the Stat Mux is connected into a G8BPQ node KISS port. As if the KISS TNC was right there in the room with the node. I ve watched the activity on the Stat Mux, and TNC2 activity leds. The ack packets take about a second to come back. It seems to work just fine.

Initially the 1.2 Ghz TNC2 on this end was running NETROM, or a TheNET variant. Been a while since we changed it, so I don t remember precisely. We have a good link on 1.2, and over the wire line, so we found that the KISS TNC was a faster way. The KISS TNC2 has less process delay, and we can run the RS-232 port of the TNC2 / Stat Mux at 19.2 KB reliably, with KISS.

---

73, Don.

AMPRNet : wb9mjn@wb9mjn.ampr.org[44.72.98.19]  
Internet: wb9mjn%wb9mjn.ampr.org@uugate.aim.utah.edu  
Website: <http://www.qth.com/antpanel>

---

## 13. Re: [NETSIG:3335] Unsubscribe

From: "Charles E. Gelm" <gelmce@erinet.com>  
Date: Mon, 11 Aug 1997 06:14:46 -0700  
To: netsig@tapr.org  
Message-ID: <33EF1046.1B60@erinet.com>  
Rendered body type: text/plain

E20EHQ <Kanok Nakchum> wrote:

>  
> Dear Sir,  
> Please unsubsrib me.  
>  
> ntinawat@netserv.chula.ac.th  
> e20ehq@amsat.org  
[Attachment: UNETSIG.TXT; text/plain; 1,906 bytes]

## 14. Re: [NETSIG:3332] G8BPQ ip routing

From: Karl Larsen <k5di@acca.nmsu.edu>  
Date: Wed, 13 Aug 1997 05:24:33 -0700  
To: netsig@tapr.org  
Message-ID: <33F1A781.1A07@acca.nmsu.edu>  
Rendered body type: text/plain

Bob Nielsen wrote:

>  
> We recently converted a local BPQ mountaintop node to use the switch.exe  
> version with ip routing. There seem to be a few problems we can't  
> explain. Are there any known problems with BPQ as a router?  
>  
> Bob  
>  
> ----  
> Bob Nielsen                   Internet: nielsen@primenet.com  
> Tucson, AZ                    AMPRnet: w6swe@w6swe.ampr.org  
>                                AX.25: w6swe@wb7tls.az.usa.noam  
>                                http://www.primenet.com/~nielsen

Hi Bob, I recall John Wise saying there was part of the router he was not able to test well. When I tried it it did not work. But was not certain I installed it properly. As I recall it made another file where it kept some data on arp and ip but it looked odd.

Suggest you load a bpq on a dos computer (if you still have one) and play with switch.exe and see what it does. I would like to put it into our Data Engine bpq system. It is a great node, but no tcp/ip.

--  
73, de Karl aka k5di

Karl F. Larsen Box 74, Mesilla Park, NM 88047 (505) 524-3303  
k5di@k5di.cruces.nm.usa.noam k5di@acca.nmsu.edu

---

## 15. TCP/IP in S. California

From: n1obu@worldnet.att.net (Douglas M. Pervine)  
Date: Wed, 13 Aug 1997 17:47:10 GMT  
To: netsig@tapr.org  
Message-ID: <33f3f15c.7700459@mailhost.worldnet.att.net>  
Rendered body type: text/plain

Hi..

I am new to JNOS and TCP/IP. I recently brought my IP station up and online.. To my suprise.. I couldn't find any IP around in the San Diego area.. I am on 145.05Mhz... This seems to be the busiest freq in the area.. I can hit a few strong NETROM Nodes.. I just can't seem to find any other IP station.. Could someone offer any words of advise?? Thanks!

--73  
Douglas M. Pervine  
44.8.0.136 = N10BU-5  
n1obu@n1obu.ampr.org (If I can find a Mail Exchange)  
n1obu@worldnet.att.net  
http://home.att.net/~n1obu

A Stranger in a Strange Land.....

---

## 16. unsubscribe please

From: chris <chris@newcomb.com>  
Date: Thu, 14 Aug 97 07:44:08 -0400  
To: netsig@tapr.org  
Message-ID: 11440865706888@newcomb.com  
Rendered body type: text/plain

[Empty message body]

---

## 17. Baycom WIN95 Device Driver

From: "(SV2AGW) George Rossopoylos" <sv2agw@the.forthnet.gr>  
Date: Wed, 20 Aug 1997 15:48:31 +0300  
To: <netsig@tapr.org>  
Message-ID: <199708201251.PAA21269@nefeli.forthnet.gr>  
Rendered body type: text/plain

Hi all  
After Christmas i decided to support in my Packet programs (AGW for WIN95)  
other tncs except from the  
standard serial tncs with KISS. So now i manage to publish the first  
version for baycom serial modem.  
This device driver is a dynamic vxd . This means that the driver is loaded  
only when it is needed. No entries in registry or system.ini no tsr from  
autoexec.bat.  
Just run Packet Engine and from its tnc setup menu select ,as  
tnc type,baycom serial.Thats all, select also the com port and the baudrate  
1200,2400,etc and you are ready.

Now you can have your baycom run with high quality software.

George Rossopoulos  
e-mail:sv2agw@the.forthet.gr  
packet:SV2AGW@SV2DXC.TSL.GRC.EU  
<http://www.forthnet.gr/sv2agw/>  
<http://www.intranet.gr/isefi/rossopou/rossopou.htm>

---

## 18. PBBS Bulletin Export Files Available

From: marty@trucom.com (Marty Albert)  
Date: Wed, 27 Aug 1997 04:15:44 GMT  
To: bbssig@tapr.org, fbb@f6fbb.org, netsig@tapr.org  
Message-ID: <3403a980.31941151@news.trucom.com>  
Rendered body type: text/plain

Hello, All:

For any packet SysOps in need, I have available bulletin export files  
on two locations now...

Via WWW at <http://www.trucom.com/ppages/marty>

Via FTP at <ftp://ftp.kc6ufm.dyn.ml.org/export>

Note that the FTP site above is normally only available from 1800 UTC  
til 0700 UTC.

All export files are password protected to prevent their being  
distributed by non-amateur means. See the above WWW site for details.

Also, if you would like to exchange traffic by E-Mail, I have two  
systems in place:

1) If you are able to send me a daily export file from your station, I  
can create a custom export file for you and send that via attached  
E-Mail daily. Only a limited number of these positions are available.

2) If you are unable or unwilling to send a daily file to me, I can  
send you a "generic" export file that contains @WW, @ALLUSA, @CANADA,  
@EU, @AMSAT, @NASA, and @ARRL bulletins. If you select this option, it  
is your responsibility to make sure that no inappropriate traffic  
leaks from your station.

Please contact me with any questions.

Take Care & 73

Marty Albert - [marty@trucom.com](mailto:marty@trucom.com)  
Amateur Radio: KC6UFM@KC6UFM.#SEMO.MO.USA.NOAM

\*\*\*\*\*  
Interested in Amateur Radio?  
<http://www.trucom.com/ppages/marty>  
\*\*\*\*\*  
HAMPS Coordinator  
<http://www.geocities.com/CapeCanaveral/Lab/7067>  
\*\*\*\*\*

---

## 19. Naked or not?

From: twininfo@1stfamily.com (David Seitz)  
Date: Sat, 30 Aug 97 15:24:58 EST  
To: Friend@public.com  
Message-ID: <19970830192732082.AAW163@mailhost.1stfamily.com>  
Rendered body type: text/plain



POWER PAGE BUSINESS BUILDER: Possibly the most powerful marketing and lead generation system of its kind in the world! Work from home NAKED if you want. (That always turns a head doesn't it? Well it must have if your reading this!) Feel free to use that in your marketing.

With Power Page, you can receive daily leads for your online business (or use Power Page as your primary business)... plus receive daily income!

Many promise to make you money... but see how many actually will: With Power Page it's simple to start an online income.

Check out some of these features!

It is better than Mega\$Nets, PC Super MLM and Tuff all combined and it will draw on that entire market to create leads for every program you are in and pay you CASH while you are gathering them.

"Brand New" MLM business Opportunity?

- \* Only \$60 can make you unlimited income
- \* Best cash for leads program ever invented
- \* Better than TUFF, Better than PC Super MLM, Better than MEGA\$NETS
- \* Sponsor unlimited wide to 5 levels.....
- \* Built in residual income...fees paid directly to you
- \* Totally automated record keeping all done for you
- \* Must personally sponsor 2....makes padding the downline difficult
- \* No home office.You are the boss and your downline pays you directly.
- \* Money in the mail every day!!!!
- \* 100% legal....You will be selling a web page service
- \* Instant Self Replicating web page to help build your business
- \* Program sells itself, just get them to your web page
- \* Computer tells your recruits where to send the money automatically
- \* Yearly income over \$370,000 when 6 sponsor 6 to 5 levels deep
- \* Market PPBB world wide (YES WORLD WIDE!!!!)
- \* Act Now! Be one of the first people to join this Opportunity .

I am level #2 in this program and I have just begun to market this program.

You are on my list of People who market heavy on the internet.

I am giving you the opportunity to get involved early.

For complete information on this once in a life time shot at this fantastic company please reply to this email with the words POWER in your subject and we will rush you all the information you need on Power Page and our web address to sign up!.

---

## 20. The Long Distance War.

From: twininfo@1stfamily.com (David Seitz)  
Date: Sat, 30 Aug 97 15:45:59 EST  
To: Friend@public.com  
Message-ID: <19970830194833786.AAW292@mailhost.1stfamily.com>  
Rendered body type: text/plain

There is "FREE" Software at the end of this message!

When it comes to long distance it's tough to choose a company you can count on and it's even tougher to weed through the volume of deals that are out there.

Finally there is a long distance company that has the same rate 24 hours a day 7 days a week and they crush AT&T's, MCI's and Sprint's prices!

And they "PAY YOU" every month! When has your long distance company ever sent you a check let alone one every month?

Please send a message to <mailto:twininfo-info@freeyellow.com> and the information on this fantastic company will be rushed to you! or reply to this email with the words telme as your subject and we will send you the complete information.

If you are currently or want to start making a serious income on the internet then I suggest you download all 3 of these "FREE" programs.

<http://www.freeyellow.com/members/twininfo/super.exe>

<http://www.freeyellow.com/members/twininfo/venture.exe>

<http://www.freeyellow.com/members/twininfo/hrm.exe>

Just create a folder anywhere on your system download your new programs into their new folder and double click on them, they will self extract all their files for you.

God bless and we wish you the best of success in your future!

You are not on a mailing list and will not be contacted again.

---

## 21. powerpage spam

From: Demos Doulou <ddoulou@gte.net>  
Date: Sat, 30 Aug 1997 23:32:30 -0400  
To: netsig@tapr.org  
Message-ID: <3.0.2.32.19970830233230.037a41c8@mail.gte.net>  
Rendered body type: text/plain

If anyone wants to reply to the sender of the last spam about power page this is his email address:

freesoftware@worldnet.att.net

This jerk needs to have several emails about telling him to stop spamming us.

73

Demos Doulou  
ddoulou@gte.net  
KR4US kr4us@amsat.org  
Pinellas County ACS Radio Officer  
Pinellas Cty ARES/ACS Home Page: <<http://home1.gte.net/scout>>  
My Home Page: <<http://home1.gte.net/ddoulou>>

---

## 22. Re: [NETSIG:3351] Naked or not?

From: Jim Oty <joty@aoc.nrao.edu>  
Date: Sun, 31 Aug 1997 11:16:04 -0600  
To: netsig@tapr.org  
Message-ID: <199708311716.LAA18294@zia.aoc.nrao.edu>  
Rendered body type: text/plain

Does TAPR endorse this POWER crap????? If so I want to be removed from the mailing list. I subscribe to TAPR for amateur radio info,,,,,,

Jim WB5GWH

---

## 23. Re: [NETSIG:3352] The Long Distance War.

From: Jim Oty <joty@aoc.nrao.edu>  
Date: Sun, 31 Aug 1997 11:17:29 -0600  
To: netsig@tapr.org  
Message-ID: <199708311717.LAA18310@zia.aoc.nrao.edu>  
Rendered body type: text/plain

Again, this has nothing to do with Ham Radio.....

---

## 24. Re: [NETSIG:3354] Re: Naked or not?

From: Barry McLarnon VE3JF <bm@lynx.ve3jf.ampr.org>  
Date: Sun, 31 Aug 1997 19:59:16 +0000 (GMT)  
To: netsig@tapr.org  
Message-ID: <199708311959.TAA06865@lynx.ve3jf.ampr.org>  
Rendered body type: text/plain

Jim Oty <joty@aoc.nrao.edu> wrote:

>

> Does TAPR endorse this POWER crap????? If so I  
> want to be removed from the mailing list. I  
> subscribe to TAPR for amateur radio info,,,,,,

I think it's just an indication that this list has returned to its former unmoderated status. It's very easy to spam an unmoderated mailing list, so the presence of a spam does not constitute any endorsement by the mailing list's owner.

Barry

--

|                             |                                                                             |
|-----------------------------|-----------------------------------------------------------------------------|
| Barry McLarnon VE3JF/VA3TCP | Internet: <a href="mailto:bm@hydra.carleton.ca">bm@hydra.carleton.ca</a>    |
| Ottawa Amateur Radio Club   | AMPRnet: <a href="mailto:bm@lynx.ve3jf.ampr.org">bm@lynx.ve3jf.ampr.org</a> |
| Packet Working Group        | Web: <a href="http://hydra.carleton.ca">http://hydra.carleton.ca</a>        |

## 25. Re: [NETSIG:3353] powerpage spam

From: Darxus <darxus@Op.Net>  
Date: Sun, 31 Aug 1997 21:21:43 -0400 (EDT)  
To: netsig@tapr.org  
Message-ID: <Pine.SUN.3.96.970831211402.8104A-100000@monet.op.net>  
Rendered body type: text/plain

On Sat, 30 Aug 1997, Demos Doulou wrote:

> If anyone wants to reply to the sender of the last spam about power page  
> this is his emai address:  
>  
> freesoftware@worldnet.att.net  
>  
> This jerk needs to have several emails about telling him to stop spamming us.

it seems to be more effective to put your mailer into Full Header mode, hit forward, and send the original message back to the \*every\* email address in the header and the body of the message, and (especially) postmaster@ every host listed in the header and the body, with a note stating your displeasure at being spammed. I've gotten a number of replies thanking me for the information, and stating that something would be done. (the postmaster, if it's not blatantly obvious, is the guy incharge of email for the system, so this would fall directly under his jurisdiction) -- I have no wish to harass postmasters, just to discourage spam.

I will never discourage anybody from flat out mailbombing people that do this shit -- this method just seems more worth my time. We gotta do \*something\*, and this seems as good a place as any to start.

you may also want to check out [www.junkemail.org](http://www.junkemail.org) -- people working with government to use U.S. mailfraud laws to fight spam.

---

\*\*\*PGP fingerprint = D5 EB F8 E7 64 55 CF 91 C2 4F E0 4D 18 B6 7C 27\*\*\*  
darxus@op.net / <http://www.op.net/~darxus>  
"You shall know the truth, and it shall make you odd."

---

## 26. Re: [NETSIG:3357] Re: powerpage spam

From: dkelly@hiwaay.net  
Date: Sun, 31 Aug 1997 23:13:04 -0500  
To: netsig@tapr.org  
Cc: darxus@op.net  
Message-ID: <199709010413.XAA02675@nosspam.hiwaay.net>  
Rendered body type: text/plain

Darxus writes:

>  
> it seems to be more effective to put your mailer into Full Header mode,  
> hit forward, and send the original message back to the \*every\* email  
> address in the header and the body of the message, and (especially)  
> postmaster@ every host listed in the header and the body, with a note  
> stating your displeasure at being spammed.

Think the note is not needed. They know you are not happy else you wouldn't have forwarded the message. A simple, "Subject: email abuse" works well. They've all seen hundreds of similar complaint so keep it brief.

> I will never discourage anybody from flat out mailbombing people that do  
> this shit -- this method just seems more worth my time. We gotta do  
> \*something\*, and this seems as good a place as any to start.

Email bombing is in poor taste. However, an infinite email loop isn't quite so bad. Simply forward \*everything\* right back to the spammer. If they have an autoresponder for their "remove list" (didn't read the original, did they claim to have a remove function? Don't answer, I don't care.) then forward their mail to their remove address. And the reply you get from the remove address. And that reply. And the next. Eventually they get the idea to put you on their own problem list.

--

David Kelly N4HHE, dkelly@hiwaay.net

=====  
The human mind ordinarily operates at only ten percent of its capacity -- the rest is overhead for the operating system.

---

# September 1997

Original source file: netsig.9709

Source: [http://ftp.tapr.org/tapr\\_history/SIG\\_Archives/netsig/mail\\_archive/netsig.9709](http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.9709)

## 1. remove

```
From: "Charles E. Gelm" <gelmce@erinet.com>
Date: Mon, 01 Sep 1997 15:36:48 -0700
To: netsig@tapr.org
Message-ID: <340B4380.AD2@erinet.com>
Rendered body type: text/plain

David Seitz wrote:
>
> POWER PAGE BUSINESS BUILDER: Possibly the most powerful marketing and lead
> generation system of its kind in the world! Work from home NAKED if you want.
> (That always turns a head doesnt it? Well it must have if your reading this!)
> Feel free to use that in your marketing.
>
> With Power Page, you can receive daily leads for your online business (or use Power
> Page as your primary business)... plus receive daily income!
>
> Many promise to make you money... but see how many actually will: With Power Page
> it's simple to start an online income.
>
> Check out some of these features!
>
> It is better than Mega$Nets, PC Super MLM and Tuff all combined and it
> will draw on that entire market to create leads for every program you
> are in and pay you CASH while you are gathering them.
>
> "Brand New" MLM business Opportunity?
>
> * Only $60 can make you unlimited income
> * Best cash for leads program ever invented
> * Better than TUFF, Better than PC Super MLM, Better than MEGA$NETS
> * Sponsor unlimited wide to 5 levels.....
> * Built in residual income...fees paid directly to you
> * Totally automated record keeping all done for you
> * Must personally sponsor 2....makes padding the downline difficult
> * No home office.You are the boss and your downline pays you directly.
> * Money in the mail every day!!!!
> * 100% legal....You will be selling a web page service
> * Instant Self Replicating web page to help build your business
> * Program sells itself, just get them to your web page
> * Computer tells your recruits where to send the money automatically
> * Yearly income over $370,000 when 6 sponsor 6 to 5 levels deep
> * Market PPBB world wide (YES WORLD WIDE!!!!)
> * Act Now! Be one of the first people to join this Opportunity .
>
> I am level #2 in this program and I have just begun to market this
> program.
> You are on my list of People who market heavy on the internet.
> I am giving you the opportunity to get involved early.
>
> For complete information on this once in a life time shot at this fantastic company
> please reply to this email with the words POWER in your subject and we will rush
> you all the information you need on Power Page and our web address to sign up!.
> remove
delete
```

## 2. remove

```
From: "Charles E. Gelm" <gelmce@erinet.com>
Date: Mon, 01 Sep 1997 15:37:13 -0700
To: netsig@tapr.org
Message-ID: <340B4399.30F8@erinet.com>
Rendered body type: text/plain

David Seitz wrote:
>
> There is "FREE" Software at the end of this message!
>
> When it comes to long distance it's tough to choose a company you can count on and it's even tougher
> to weed through the volume of deals that
> are out there.
>
> Finally there is a long distance company that has the same rate 24 hours a day 7 days a week and they
> crush AT&T's, MCI's and Sprint's
```

prices!  
>  
> And they "PAY YOU" every month! When has your long distance company ever sent you a check let alone one every month?  
>  
> Please send a message to [mailto:twininfo-info@freeyellow.com](mailto:mailto:twininfo-info@freeyellow.com) and the information on this fantastic company will be rushed to you! or reply to this email with t  
>  
> If you are currently or want to start making a serious income on the internet then I suggest you download all 3 of these "FREE" programs.  
>  
> <http://www.freeyellow.com/members/twininfo/super.exe>  
>  
> <http://www.freeyellow.com/members/twininfo/venture.exe>  
>  
> <http://www.freeyellow.com/members/twininfo/hrm.exe>  
>  
> Just create a folder anywhere on your system download your new programs into their new folder and double click on them, they will self extract all their files  
>  
> God bless and we wish you the best of success in your future!  
>  
> You are not on a mailing list and will not be contacted again.remove delete

---

### 3. Re: [NETSIG:3356] Re: Naked or not?

From: Darxus <[darxus@Op.Net](mailto:darxus@Op.Net)>  
Date: Mon, 1 Sep 1997 20:08:48 -0400 (EDT)  
To: [netsig@tapr.org](mailto:netsig@tapr.org)  
Message-ID: <[Pine.SUN.3.96.970901200746.13172I-100000@monet.op.net](mailto:Pine.SUN.3.96.970901200746.13172I-100000@monet.op.net)>  
Rendered body type: text/plain

On Sun, 31 Aug 1997, Barry McLarnon VE3JF wrote:

> Jim Oty <[joty@aoc.nrao.edu](mailto:joty@aoc.nrao.edu)> wrote:  
> >  
> > Does TAPR endorse this POWER crap????? If so I  
> > want to be removed from the mailing list. I  
> > subscribe to TAPR for amateur radio info,,,,,  
>  
> I think it's just an indication that this list has returned to its  
> former unmoderated status. It's very easy to spam an unmoderated  
> mailing list, so the presence of a spam does not constitute any  
> endorsement by the mailing list's owner.

from this I would also guess that the list is configured to allow posts from addresses which are not subscribed. I believe most lists I've seen do not allow this, which would prevent such posts, for the most part.

---

\*\*\*PGP fingerprint = D5 EB F8 E7 64 55 CF 91 C2 4F E0 4D 18 B6 7C 27\*\*\*  
darxus@op.net / <http://www.op.net/~darxus>  
"You shall know the truth, and it shall make you odd."

---

### 4. Re: [NETSIG:3361] Re: Naked or not?

From: [bm@lynx.ve3jf.ampr.org](mailto:bm@lynx.ve3jf.ampr.org)  
Date: Tue, 2 Sep 1997 01:28:35 +0000 (GMT)  
To: [netsig@tapr.org](mailto:netsig@tapr.org)  
Message-ID: <[199709020128.BAA12475@lynx.ve3jf.ampr.org](mailto:199709020128.BAA12475@lynx.ve3jf.ampr.org)>  
Rendered body type: text/plain

Darxus <[darxus@op.net](mailto:darxus@op.net)> wrote:

> On Sun, 31 Aug 1997, Barry McLarnon VE3JF wrote:

>  
> > Jim Oty <[joty@aoc.nrao.edu](mailto:joty@aoc.nrao.edu)> wrote:  
> > >  
> > > Does TAPR endorse this POWER crap????? If so I  
> > > want to be removed from the mailing list. I  
> > > subscribe to TAPR for amateur radio info,,,,,  
> >  
> > I think it's just an indication that this list has returned to its  
> > former unmoderated status. It's very easy to spam an unmoderated  
> > mailing list, so the presence of a spam does not constitute any  
> > endorsement by the mailing list's owner.  
>  
> from this I would also guess that the list is configured to allow posts  
> from addresses which are not subscribed. I believe most lists I've seen  
> do not allow this, which would prevent such posts, for the most part.

True, although spammers have been known to subscribe to mailing lists in order to bypass that restriction. The TAPR lists could certainly be configured for subscriber-only posting, but the tradeoff is that it tends to cause headaches for subscribers, whose messages get bounced because they have a minor change in their email address, or post the message from a different place than they subscribed from.

Instead of overreacting and putting more irrelevant mail on the list, why not just delete the spam? It only takes a second.

Barry

--

|                             |                                 |
|-----------------------------|---------------------------------|
| Barry McLarnon VE3JF/VA3TCP | Internet: bm@hydra.carleton.ca  |
| Ottawa Amateur Radio Club   | AMPRnet: bm@lynx.ve3jf.ampr.org |
| Packet Working Group        | Web: http://hydra.carleton.ca   |

---

## 5. Re: [NETSIG:3356] Re: Naked or not?

From: Mike Curtis <wd6ehr@kaiwan.com>  
Date: Mon, 1 Sep 1997 23:46:56 -0700 (PDT)  
To: netsig@tapr.org  
Message-ID: <Pine.SUN.3.95.970901234153.10636A-100000@kaiwan009.kaiwan.com>  
Rendered body type: text/plain

<A lot of unnecessary carping deleted>

So instead of just killing the ONE LITTLE stupid spam and getting on with life, we're now generating an order of magnitude more junk? Sorry, Chicken Little, but the sky is not falling.

Come on, folks, get a life! Gripe if there is a BUNCH of Spam, not if just one piece of junk mail eludes the safeguards.

-- mike

---

## 6. Flexnet ftp home

From: iw1cfl@ik1xht.ampr.org (Michele Debandi)  
Date: Tue, 02 Sep 97 18:27:28 +0200  
To: netsig@tapr.org  
Message-ID: <4275@ik1xht.ampr.org>  
Rendered body type: text/plain

Message-Id: 4275\_ik1xht  
From: iw1cfl@ik1xht (Michele Debandi)  
To: netsig@tapr.org

Hello all,

does anybody know where I could find PC/Flexnet files, configuration examples and manual? An archie search gave me no informations. If anybody knows an ftp site (either in ampr.org domain or in the 'rest of the world') where I could download this file, makes me a great pleasure.

73

Mike  
iw1cfl

--

Michele Debandi - IW1CFL - Universita` di Torino

---

## 7. [NETSIG:3364] NETSIG digest 678 -Reply

From: Don Rotolo <ROTOL0@usa.mercedes-benz.com>  
Date: Wed, 03 Sep 1997 09:04:54 -0400  
To: netsig@tapr.org  
Message-ID: <s40d2966.083@mail1.allegro.net>  
Rendered body type: text/plain

>Date: Tue, 02 Sep 97 18:27:28 +0200  
>From: iw1cfl@ik1xht.ampr.org (Michele Debandi)  
>To: netsig@tapr.org  
>Subject: Flexnet ftp home

>Hello all,

>does anybody know where I could find PC/Flexnet files,  
>configuration examples and manual? An archie search

>gived me no informations.  
>If anybody knows an ftp site (either in ampr.org domain or  
>in the 'rest of the world') where I could download this file,  
>makes me a great pleasure.

>73  
>Mike  
>iw1cfl  
>--  
>Michele Debandi - IW1CFL - Universita' di Torino

Mike,  
Try the FlexNet home page at  
<<http://dl0td.afthd.th-darmstadt.de/~flexnet/>>

>From there, you can get the PC/FlexNet code.

If you have any questions, you can direct them to the E-mail  
addresses on the FlexNet page (they speak German and English),  
or to this page, or to me directly.

73 & good luck,  
Don N2IRZ  
<n2irz@rats.org>

---

## 8. Unsubscribe

From: Ed Kaprocki <kaprocki@iag.net>  
Date: Wed, 3 Sep 1997 21:14:19 -0400  
To: "'netsig@tapr.org'" <netsig@tapr.org>  
Message-ID: <01BCB8AE.73F3A960@d069.aspg.fl.iag.net>  
Rendered body type: text/plain  
  
[Empty message body]

---

## 9. Re: [NETSIG:3366] Unsubscribe

From: "Charles E. Gelm" <gelmc@erinet.com>  
Date: Sat, 06 Sep 1997 17:26:44 -0700  
To: netsig@tapr.org  
Message-ID: <3411F4C4.7B0F@erinet.com>  
Rendered body type: text/plain

Ed Kaprocki wrote:

>

>

> -----  
[Attachment: UNETSIG.TXT; text/plain; 1,906 bytes]

---

## 10. 2M/UHF Diplexer performance

From: John Ackermann N8UR <jra@febo.com>  
Date: Sat, 06 Sep 1997 22:20:02 -0400  
To: netbuilders@meow.febo.com, netsig@tapr.org  
Cc: ke8tq@meow.febo.com, kilt@meow.febo.com  
Message-ID: <199709070220.WAA21146@meow.febo.com>  
Rendered body type: text/plain

TO: netsig@tapr.org and the SW Ohio netbuilders list  
cc: KILT and KE8TQ

Tonight I took a look at two Diamond 2M/UHF diplexrs to see what their loss  
and isolation performance was like. The results are interesting, particularly  
since I found that one of the two units was defective on the UHF side.

The test setup was: Alinco DJ-580T handheld, transmitting into a 15dB pad  
into the diplexer, and then through 30dB of pads into an HP 432A power meter.  
The meter has a log scale that covers a range of 0 to -10dBm. It spreads 0 to  
-2 dBm pretty broadly, and makes it easy to see .1dB changes. From -2dBm to  
-4dBm the scale compresses a bit, but you can still get to something around  
.1dB resolution. Below the -5dBm point, the scale compresses pretty badly and  
you can't see more than about 1dB. I tried to set the levels for all  
measurements to use the top half of the scale, and I ran the HT on either low  
or medium power output to minimize heating and drift in the output power (I  
used full power, though, for the isolation tests).

For informational purposes, I took readings with the unused port both open and  
terminated with a 50 ohm load. The difference was barely noticeable, so I'm  
not showing both sets of readings here. The "no diplexer" reference  
measurements were taken with the same set of cables and adapters as those used  
to measure the diplexer, so losses should be consistent in all cases, though  
the electrical length of the test fixture varied by the added length of the  
diplexer.









Rendered body type: text/plain

Michele Debandi wrote:

```
>
> Message-Id: 4275_ik1xht
> From: iw1cfl@ik1xht (Michele Debandi)
> To: netsig@tapr.org
>
> Hello all,
>
> does anybody know where I could find PC/Flexnet files, configuration
> examples and manual? An archie search gived me no informations.
> If anybody knows an ftp site (either in ampr.org domain or in
> the 'rest of the world') where I could download this file, makes
> me a great pleasure.
>
```

sri, I cannot give you the desired info,  
but If you intend to do TCP/IP via packet, it may be a alternative to  
use a TNC with SLIP capabilities. With SLIP the TNC can be accessed  
via Netscape directly, a special login script will manage the connect.

TNC with SLIP are described at <http://symek.com>, for TNC2 clones, a  
27C256 EPROM with SLIP is available from nord<[link](#) (links to nord<[link](#)  
mentioned in the symek pages).

73! Ulf, DK9SJ

--  
Ulf Kumm, DK9SJ, Mail: [ulfkumm@symek.com](mailto:ulfkumm@symek.com)

---

## 15. Re: Error Condition Re: unsub

From: Mike Curtis <[wd6ehr@kaiwan.com](mailto:wd6ehr@kaiwan.com)>  
Date: Tue, 9 Sep 1997 02:27:42 -0700 (PDT)  
To: [netsig@tapr.org](mailto:netsig@tapr.org)  
Message-ID: <Pine.SUN.3.95.970909022703.11238J-100000@kaiwan009.kaiwan.com>  
Rendered body type: text/plain

```
> ---
> unsubscribe netsig wd6ehr@kaiwan009.com
> end
>
> I'm cc:ing to the list because my email address is slightly different from
> my sub address and the listserver won't unsub me (for vacation), and I am
> hoping that someone will please take care of this for me. Otherwise my
> mailbox will fill up and my ears will be burning as you all gripe about
> all the bounces.
>
>
> -- mike
```

---

## 16. Re: [NETSIG:3373] Re: Error Condition Re: unsub

From: "Greg Jones, WD5IVD" <[wd5ivd@tapr.org](mailto:wd5ivd@tapr.org)>  
Date: Tue, 9 Sep 1997 09:33:35 -0500  
To: [netsig@tapr.org](mailto:netsig@tapr.org)  
Message-ID: <[v0311072db03b0e7b02b0@\[208.134.134.40\]](mailto:v0311072db03b0e7b02b0@[208.134.134.40])>  
Rendered body type: text/plain

Use the Web page Mike (<http://www.tapr.org/tapr/html/sigs.html>). Then  
enter the exact e-mail address that the system has for you before the  
change.

Cheers - Greg

```
>> ---
>> unsubscribe netsig wd6ehr@kaiwan009.com
>> end
>>
>> I'm cc:ing to the list because my email address is slightly different from
>> my sub address and the listserver won't unsub me (for vacation), and I am
>> hoping that someone will please take care of this for me. Otherwise my
>> mailbox will fill up and my ears will be burning as you all gripe about
>> all the bounces.
>>
>>
>> -- mike
```

-----

Greg Jones, WD5IVD  
Austin, Texas  
wd5ivd@tapr.org  
<http://www.tapr.org/~wd5ivd>  
-----

"Before you become too entranced with gorgeous gadgets  
and mesmerizing video displays, let me remind you that  
information is not knowledge, knowledge is not wisdom,  
and wisdom is not foresight. Each grows out of the other  
and we need them all." -Arthur C. Clarke

---

## 17. AX.25 Question

From: "Clendon S. Gibson" <cgibson@comp.uark.edu>  
Date: Wed, 10 Sep 1997 10:52:16 -0500 (CDT)  
To: netsig@tapr.org  
Message-ID: <Pine.SOL.3.95.970910105110.22058C-100000@comp>  
Rendered body type: text/plain

Would it be appropriate to ask a detail question about ax.25. If not could  
someone direct me to a better place.

Thanks!

csg2@engr.uark.edu |  
cgibson@comp.uark.edu |

---

## 18. Re: [NETSIG:3375] AX.25 Question

From: Ulf.Kumm@t-online.de (Ulf Kumm)  
Date: Thu, 11 Sep 1997 08:19:50 +0200  
To: netsig@tapr.org  
Message-ID: <34178D86.3FC0@t-online.de>  
Rendered body type: text/plain

Clendon S. Gibson wrote:

>  
> Would it be appropriate to ask a detail question about ax.25. If not could  
> someone direct me to a better place.  
>  
> Thanks!  
>  
> csg2@engr.uark.edu |  
> cgibson@comp.uark.edu |

try our homepage and find the link to TAPR.  
There, as far as i know, exists the AX.25 protocol description  
to download. Just search.

If you do'nt succeed, ask again.

73! Ulf

--

Ulf Kumm, DK9SJ, SYMEK GmbH, Mail: [ulfkumm@symek.com](mailto:ulfkumm@symek.com)  
D-70597 Stuttgart, Johannes-Kraemer-Strasse 34  
Phone: +49 711 7678-925, Fax: -924, <http://symek.com>

---

## 19. Re: [NETSIG:3376] Re: AX.25 Question

From: Lyndon Nerenberg <lyndon@ve7tcp.ampr.org>  
Date: Thu, 11 Sep 1997 09:49:37 -0600  
To: netsig@tapr.org  
Message-ID: <199709111549.JAA27308@ve7tcp.ampr.org>  
Rendered body type: text/plain

For an online AX.25 spec:

<http://ve7tcp.ampr.org/Packet/ax25-v2.html>

--lyndon

---

## 20. AX.25 question part two. I already have the doc

From: "Clendon S. Gibson" <cgibson@comp.uark.edu>  
Date: Thu, 11 Sep 1997 13:51:28 -0500 (CDT)  
To: netsig@tapr.org  
Message-ID: <Pine.SOL.3.95.970911134255.15171C-100000@comp>  
Rendered body type: text/plain

Thanks to those who directed me to the standard.

It was the standard doc that is actually causing me some confusion.

To conform to HDLC each frame of AX.25 has an FCS which is a 16 bit CRC checksum. The way I read checksum you simply start with the MSB of the first byte of the message and go until you run out message. BUT in AX.25 you send the message in a weird way.

Each byte of the frame except the FCS is sent LSB first.

So do I calculate the CRC bitwise with the message, or do I calculate it bitwise as it is shipped out for transmission.

I have some documentation that says bitwise (i.e. the first bit in the xor division is the MSB of the first byte of the message) and I have some doc that says you start with the first \*transmitted\* bit.

Any ideas?

Thanks!

csg2@engr.uark.edu |  
cgibson@comp.uark.edu |

---

## 21. Re: [NETSIG:3377] Re: AX.25 Question

From: "Greg Jones, Wd5IVD" <wd5ivd@tapr.org>  
Date: Fri, 12 Sep 1997 00:20:02 -0500 (CDT)  
To: netsig@tapr.org  
Message-ID: <103102802b03e39f88143@206.133.248.29>  
Rendered body type: text/plain

The AX.25 spec on TAPR.ORG is considered to be the official version now by TAPR and the ARRL.

<http://www.tapr.org/tapr/html/ax25.html> (I think that is the ref).

The new version 2.1 specs should be available sometime before Xmas in pdf format.

Cheers - Greg

>For an online AX.25 spec:  
>  
> <http://ve7tcp.ampr.org/Packet/ax25-v2.html>  
>  
>--lyndon

---

## 22. Re: [NETSIG:3379] Re: AX.25 Question

From: Lyndon Nerenberg <lyndon@ve7tcp.ampr.org>  
Date: Fri, 12 Sep 1997 09:43:20 -0600  
To: netsig@tapr.org  
Message-ID: <199709121543.JAA29001@ve7tcp.ampr.org>  
Rendered body type: text/plain

> The AX.25 spec on TAPR.ORG is considered to be the official version now by  
> TAPR and the ARRL.

Jeez, all that formatting down the drain ... :-)

What, if anything, is different between the spec on TAPR and the previous versions?

> <http://www.tapr.org/tapr/html/ax25.html> (I think that is the ref).

I'll track it down and get the link updated.

--lyndon

---

## 23. Re: [NETSIG:3379] Re: AX.25 Question

From: Bob Nielsen <nielsen@primenet.com>  
Date: Fri, 12 Sep 1997 08:56:22 -0700 (MST)  
To: netsig@tapr.org  
Message-ID: <Pine.LNX.3.96.970912085312.1053C-100000@nielsen.tus.primenet.com>  
Rendered body type: text/plain

On Fri, 12 Sep 1997, Greg Jones, Wd5IVD wrote:

> The AX.25 spec on TAPR.ORG is considered to be the official version now by  
> TAPR and the ARRL.

>  
> <http://www.tapr.org/tapr/html/ax25.html> (I think that is the ref).  
  
There also is a text version at <ftp://ftp.tapr.org/tapr.general/ax25.doc>  
(this has been there for several years).  
  
>  
> The new version 2.1 specs should be available sometime before Xmas in pdf  
> format.  
  
Hopefully a text version will also be made available for the  
graphically-impaired.  
  
Bob  
  
-----  
Bob Nielsen                      Internet: nielsen@primenet.com  
Tucson, AZ                      AMPRnet: w6swe@w6swe.ampr.org  
                                 <http://www.primenet.com/~nielsen>

---

## 24. Re: [NETSIG:3380] Re: AX.25 Question

From: "Greg Jones, Wd5IVD" <wd5ivd@tapr.org>  
Date: Fri, 12 Sep 1997 11:34:43 -0500 (CDT)  
To: netsig@tapr.org  
Message-ID: <l0310280db03edad30c70@[206.133.248.31]>  
Rendered body type: text/plain  
  
The PIDs are all up to date to reflect changes over the last two years and  
other minor edits.  
  
The ftp version that Bob referred needs to be updated. I'll stick that on  
my things to do when I get back from the Riverside, CA conference this  
weekend.  
  
Cheers - Greg  
  
>> The AX.25 spec on TAPR.ORG is considered to be the official version now by  
>> TAPR and the ARRL.  
>  
>Jeez, all that formatting down the drain ... :-)  
>  
>What, if anything, is dofferent between the spec on TAPR and the  
>previous versions?  
>  
>> <http://www.tapr.org/tapr/html/ax25.html> (I think that is the ref).  
>  
>I'll track it down and get the link updated.  
>  
>--lyndon

---

## 25. Re: [NETSIG:3380] Re: AX.25 Question

From: Bob Nielsen <nielsen@primenet.com>  
Date: Fri, 12 Sep 1997 10:01:00 -0700 (MST)  
To: netsig@tapr.org  
Message-ID: <Pine.LNX.3.96.970912100018.1354A-100000@nielsen.tus.primenet.com>  
Rendered body type: text/plain  
  
On Fri, 12 Sep 1997, Lyndon Nerenberg wrote:  
  
> > The AX.25 spec on TAPR.ORG is considered to be the official version now by  
> > TAPR and the ARRL.  
>  
> Jeez, all that formatting down the drain ... :-)  
>  
> What, if anything, is dofferent between the spec on TAPR and the  
> previous versions?  
  
Nothing in content, just HTML-ized (see the note at the bottom).  
  
Bob  
  
-----  
Bob Nielsen                      Internet: nielsen@primenet.com  
Tucson, AZ                      AMPRnet: w6swe@w6swe.ampr.org  
                                 <http://www.primenet.com/~nielsen>

---

## 26. Re: [NETSIG:3381] Re: AX.25 Question

From: Bob Nielsen <nielsen@primenet.com>  
Date: Fri, 12 Sep 1997 10:04:46 -0700 (MST)  
To: netsig@tapr.org  
Message-ID: <Pine.LNX.3.96.970912100130.1354B-100000@nielsen.tus.primenet.com>  
Rendered body type: text/plain

On Fri, 12 Sep 1997, Bob Nielsen wrote:

>  
> There also is a text version at ftp://ftp.tapr.org/tapr.general/ax25.doc  
> (this has been there for several years).

That SHOULD have read:

ftp://ftp.tapr.org/tapr/general/ax25.doc

Bob

-----  
Bob Nielsen                      Internet: nielsen@primenet.com  
Tucson, AZ                      AMPRnet: w6swe@w6swe.ampr.org  
                                 http://www.primenet.com/~nielsen

---

## 27. Re: [NETSIG:3378] AX.25 question part two. I already have the doc

From: healy@sierra.net (Bill Healy)  
Date: Sat, 13 Sep 1997 12:59:39 +0000  
To: netsig@tapr.org  
Message-ID: <199709132004.AA01746@diamond.sierra.net>  
Rendered body type: text/plain

>Thanks to those who directed me to the standard.  
>  
>It was the standard doc that is actually causing me some confusion.  
>  
>To conform to HDLC each frame of AX.25 has an FCS which is a 16 bit CRC  
>checksum. The way I read checksum you simply start with the MSB of the  
>first byte of the message and go until you run out message. BUT in AX.25  
>you send the message in a weird way.  
>  
>Each byte of the frame except the FCS is sent LSB first.  
>  
>So do I calculate the CRC bitwise with the message, or do I calculate it  
>bitwise as it is shipped out for transmission.  
>

I've forgotten or missed the reason you need this information. Are you working on bit banging HDLC or interfacing to a TNC in KISS mode? If it's the latter then you don't have to worry about the CRC, the TNC does the checking for you and only passes on packets that are valid to the serial port. The packets are also passed stripped of the CRC so you never see it. It also take care of generating the CRC for you on send.

Bill

---

## 28. Re: [NETSIG:3385] Re: AX.25 question part two. I already have the doc

From: "Clendon S. Gibson" <cgibson@comp.uark.edu>  
Date: Mon, 15 Sep 1997 10:15:13 -0500 (CDT)  
To: netsig@tapr.org  
Message-ID: <Pine.SOL.3.95.970915101113.23485D-100000@comp>  
Rendered body type: text/plain

>  
> I've forgotten or missed the reason you need this information. Are you  
> working on bit banging HDLC or interfacing to a TNC in KISS mode? If it's  
> the latter then you don't have to worry about the CRC, the TNC does the  
> checking for you and only passes on packets that are valid to the serial  
> port. The packets are also passed stripped of the CRC so you never see it.  
> It also take care of generating the CRC for you on send.  
>  
> Bill  
>  
>

Sorry, I did not originally explain the why.

I am actually building a radio modem for a masters thesis in EE. I am using an HC05 and (hopefully) some rx/tx pairs available from Lynx Technologies.

The focus of this build is small, lightweight, and low power. This is to make it suitable for use as a lan for small mobile robots. This in turn is to foster research in the area of cooperative behavior in robots.

As you can see, I do need to know the details.

csg2@engr.uark.edu |  
cgibson@comp.uark.edu |

---

## 29. Here It Is !!

From: Selective.Marketing@oce.orst.edu  
Date: Mon, 29 Sep 97 15:04:40 EST  
To: barry12@aol.com  
Message-ID: < >  
Rendered body type: text/plain

Selective Marketing has your answer for doing business on the Internet. You can improve your Internet business by as much as 150% in the next 48 hours. What you are about to read has never been done on the Internet before. We are actually giving away over \$750.00 in Internet promotional software. Please read for details.

For a limited time you can purchase over 37 million e-mail addresses on CD Rom for only \$349.00. When you purchase this software you will receive over \$750.00 in Internet Promotional Software. That's right, when you purchase our CD Rom with over 37 million e-mail addresses on it you will receive a mass mailing program for sending your e-mail messages and an e-mail extraction program that will extract targeted e-mail addresses while you sleep. The mailing program can send from 100,000 to 500,000 e-mails per hour.

We can also submit your Web Site to over 250 of the top search engines for the unbelievable price of only \$69.00. You pick the keywords and we do the rest. Instant submission. You will receive confirmation from the search engines webmaster confirming that your site was registered.

If you would like we will even do the direct e-mail marketing for your Web Site, Multi-level program, product, or service for you. Please call for rates.

If you would like more information concerning any of our services or products please call us at (904) 779-1721.

---

## 30. I look for a volunteer in JNOS programming ...

From: nlafe@itn.it  
Date: Tue, 30 Sep 1997 15:56:20 +0200  
To: netsig@tapr.org  
Message-ID: <199709301356.PAA13910@mail.ats.it>  
Rendered body type: text/plain

MIME version: 1.0  
Content-Type: message/rfc822  
Content-transfer-encoding: 8bit  
boundary="--tcpsmtp090300199715037012"  
--tcpsmtp090300199715037012

Hi NETSIG people,  
I am trying to develop a very simple and straight forward little program based on KA9Q JNOS code.

Is there anybody out there ready to work for it?

Not a lot of money, but a lot of satisfaction. I live in beautiful Italy, by the way.

Thanks in advance. You can write also privately if you so like.

Cheers...

Nunzio LA FERLITA  
nlafe@itn.it

Net-Tamer V 1.08 - Registered

--tcpsmtp090300199715037012

---

## 31. 1997 ARRL and TAPR DCC Reminder



From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>  
Date: Tue, 30 Sep 1997 15:15:53 -0500  
To: " TAPR/AMSAT DSP " <dsp@tapr.org>, " Spread Spectrum " <ss@tapr.org>,  
"HF SIG list mailing" <hfsig@tapr.org>,  
"NETSIG list mailing" <netsig@tapr.org>,  
"TAPR APRS SIG" <aprssig@tapr.org>, " MIC-E Beta " <mic-e@tapr.org>,  
" tacgps " <tacgps@tapr.org>  
Message-ID: <v03110717b0570c981bd4@[208.134.134.40]>  
Rendered body type: text/plain

Don't forget that the 16th Annual ARRL and TAPR Digital Communications Conference is in just a few days!

It is not too late to make the conference. Registration is already at a high and we expect a really great conference! Hope to see you in Baltimore.

1997 ARRL and TAPR Digital Communications Conference  
October 10-12, 1997  
Baltimore, Maryland (minutes from BWI airport)

Main Web Page -- <http://www.tapr.org/dcc>  
Tentative Schedule -- <http://www.tapr.org/tapr/html/dcc97schedule.html>  
Proceedings Abstracts -- <http://www.tapr.org/tapr/html/cnc16.html>  
Local Attractions -- [http://www.tapr.org/tapr/html/dcc97\\_attractions.html](http://www.tapr.org/tapr/html/dcc97_attractions.html)

-----  
The 1997 ARRL and TAPR Digital Communications Conference will be held on October 10-12, 1997 in Baltimore, Maryland. This years conference location is just minutes away from the BWI Airport.

What can you expect during the 1997 ARRL and TAPR Digital Communications Conference ?

- \* A full day of papers and breakouts on Saturday for the beginner to the advanced amateur digital enthusiast.

- \* Three workshops
  - o Friday (1pm - 8pm) - APRS Symposium (<http://www.aprs.net/dcc/>)
  - o Friday (4pm - 8pm) - Seminar on RF Basics for Computer Weenies
  - o Sunday (8:30am - 1:30pm) - Seminar on Spread Spectrum system Design and Theory

- \* The second annual Student paper session.

- \* A banquet with a Special Guest Speaker Yutaka Sakurai, JF1LZQ who is Vice President of Japan's Packet Radio User's Group (PRUG). His talk is entitled, "Japan's PRUG: A look at its history and a view to the future". He will discuss the history of the PRUG from its early beginnings in the mid-80's and track its development to today. He will also discuss some of PRUG's current projects and its goals for the future.

- \* SIGs (Special Interest Groups) on Saturday following the banquet.

- \* Informal get-togethers throughout the weekend.

- \* TAPR Membership Meeting

-----

#### Special Symposiums/Seminars

In addition to the presentation of papers on Saturday, three symposiums/seminars will be held before and after the conference. These sessions are provided to allow those with additional time and interest to make the most of the Digital Communications Conference. For those that might have interest in just a symposium or seminar, registration for the conference is not necessary to register and attend one or more of the symposiums and seminars. This allows maximum flexibility for those that might want to participate during the Digital Communications Conference, but do not have an entire weekend to devote to the event.

A full day symposium on Friday covering APRS will be conducted by Bob Bruninga, WB4APR (father of APRS) Keith Sproul, WU2Z, Mark Sproul, KB2ICI (developers of Mac and Windows APRS), Steve Dimse, K4HG (developer of javAPRS), and other nationally known APRS leaders. Join this group for the afternoon and evening for in depth discussions and presentations on the current and future status of APRS. This is an unique opportunity to gain insight into this fast growing digital aspect of amateur operations that combines computers, packet radio, and GPS (Global Positioning System). See

<http://www.aprs.net/dcc/> for schedule.

Starting late Friday afternoon a half-day seminar entitled "RF Basics for Computer Weenies: Helping the RF-challenged get the most out of the new high-speed wireless toys" presented by Mike Cheponis, K3MC. The seminar will focus on such topic as basic antenna types and their characteristics, comparison of feedlines and connector types, propagation basics (calculation of path loss, multipath effects, fresnel zones, etc), weatherproofing, lightning protection, filters, basic RF measurements, and other issues related to maintaining radio equipment on the UHF/SHF bands. This seminar will be starting late enough in the afternoon on Friday to allow those flying on that day to attend the seminar.

On Sunday morning, Dewayne Hendricks, WA8DZP, Phil Karn, KA9Q, and Tom McDermott, N5EG, will conduct a seminar focusing on "Spread Spectrum System Design and Theory." All three presenters are well known for their work in various areas of amateur digital communications and this 5 hour seminar should be an excellent opportunity to learn about the design and theory of spread spectrum systems. This seminar is a follow up to the past two seminars of PCS technology by Dewayne with a new focus on system design.

-----

#### Airports

- \* The closest airport is Baltimore/Washington International (BWI)
- \* For those flying internationally or located on the East coast, check flights into
  - o Dulles International or
  - o Washington National Airport
- \* Bus/rail service from either Dulles or Washington to BWI is available, but be sure to check on this before arriving.

-----

#### Hotel Information

Conference presentations, meetings, and workshops will be held at the Holiday Inn BWI Airport. DCC special rooms rates are \$89 per night. When making reservations with the hotel, be sure to indicate you are attending the ARRL and TAPR DCC conference. The hotel provides transportation to and from BWI Airport, Amtrak/MARC rail station, and the local Baltimore Light Rail. You should contact the hotel to arrange transportation.

Holiday Inn BWI Airport (conference hotel)  
890 Elkridge Landing Rd, Linthicum, MD, 21090  
(410) 859-8400, Fax (410) 684-6778

3912.00N and 07641.34W

-----

#### Directions to Conference

Coming from Baltimore Metro Area:  
Follow MD-295 SOUTH towards BWI airport  
Take W. NURSERY Rd exit  
LEFT at the list at the end of the exit  
RIGHT at the 3rd light, WINERSON Rd  
LEFT at the 1st light, ELKRIDGE LANDING Rd  
Holiday Inn BWI will be 1/2 mile on right.

Coming from Annapolis:  
Follow I-97 NORTH/RT. 3 NORTH  
Take DORSEY Rd Exit (rt 176 West)  
RIGHT onto AVIATION Blvd (Rt 162)  
Pass BWI Satellite parking  
Follow signs to BWI Airport  
RIGHT onto ELKRIDGE LANDING Rd  
Holiday Inn BWI will be 1/2 mile on left.

Coming from Washington, DC:  
Follow I-95 NORTH or MD-295 NORTH towards Baltimore  
Take I-195 EAST towards BWI airport  
Take EXIT 1A (Rt. 170 North)  
LEFT at 2nd light, ELKRIDGE LANDING Rd  
Holiday Inn BWI will be 1/2 mile on left.

Coming from the North:

Follow I-95 SOUTH or NEW JERSEY TURNPIKE SOUTH to I-95 South  
Take I-95 SOUTH to I-195 EAST/AIRPORT to  
Rt. 170 NORTH LINTHICUM to 2nd light,  
turn left onto ELKRIDGE LANDING Rd  
Holiday Inn BWI will be 1 mile on left.

-----  
Local Repeater Talk-In  
Maryland FM Association WA3DZD repeater network has given premission to use  
their system for the talk-in on Saturday morning, October 11, 1997 and for  
use during the conference weekend. The frequencies are:

- \* 146.76 out, 146.16 in
- \* 224.76 out, 223.16 in
- \* 444.00 out, 449.00 in

The talk-in station will be using the call sign W3NSA.

Many thanks to the Maryland FM Association.

-----  
Tucson Amateur Packet Radio  
8987-309 E Tanque Verde Rd #337 \* Tucson, Az \* 85749-9399 \* 940-383-0000  
-----  
e-mail: [tapr@tapr.org](mailto:tapr@tapr.org) ftp: [ftp.tapr.org](ftp://ftp.tapr.org) web: <http://www.tapr.org/>  
-----

---

## 32. Re: [NETSIG:3387] Here It Is !!

From: Paul A Beltrani <[beltrani@hawaii.edu](mailto:beltrani@hawaii.edu)>  
Date: Tue, 30 Sep 1997 11:25:39 -1000  
To: [netsig@tapr.org](mailto:netsig@tapr.org)  
Message-ID: <Pine.GS0.3.95q.970930111905.10491A-100000@uhunix4>  
Rendered body type: text/plain

On Tue, 30 Sep 1997 Selective.Marketing@oce.orst.edu wrote:

> Selective Marketing has your answer for doing business on the Internet. You can improve your Internet  
business  
> ....  
> please call us at (904) 779-1721.

If this is a local call for someone on the list, I would appreciate it if  
they would call and

- 1) First get his REAL email address
- 2) Explain to him spamming is rude, It is unethical to shift  
your business costs onto others without their permission.
- 3) Send me his email address, I'll see to it he has plenty to keep him busy.

- Paul Beltrani

---

# October 1997

Original source file: netsig.9710

Source: [http://ftp.tapr.org/tapr\\_history/SIG\\_Archives/netsig/mail\\_archive/netsig.9710](http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.9710)

## 1. How to deal with spam (UCE)

From: WBRADFORD@delphi.com  
Date: Tue, 30 Sep 1997 22:41:08 -0400 (EDT)  
To: netsig@tapr.org  
Message-ID: <01109QL2GW6A8X27FT@delphi.com>  
Rendered body type: text/plain

Dang I hate to see spam on our lists. Here is a bit of the latest, with my comments added. This is off the NETSIG topic, but because this crap is appearing more and more, I feel it's OK to put out some info on what we might do to slow it down. 'mc' = my comment Now the recent spam: (Unolicited Commercial Email UCE)

>>>>>>>>>>

Date: Mon, 29 Sep 97 15:04:40 EST  
From: Selective.Marketing@oce.orst.edu  
To: barry12@aol.com (mc: and probably to thousands of others...)  
Subject: Here It Is !!  
Message-ID: < > (mc: no Msg ID = hide who I really am, this is spam!)

Selective Marketing has your answer for doing business on the Internet. You can improve your Internet business by as much as 150% in the next 48 hours. What you are about to read has never been done on the Internet before. We are actually giving away over \$750.00 in Internet promotional software. Please read for details.

For a limited time you can purchase over 37 million e-mail addresses on CD Rom for only \$349.00. When you purchase

<mc snip the garbage >

If you would like more information concerning any of our services or products please call us at (904) 779-1721.

>>>>>>>>>> end of spam

1- We have to respond to spam. To whom? the ISP of spam sender

Most ISP's (internet service providers) do not want their users/clients/customers to send spam, and most have a policy that restricts it. So usually, they are glad to hear of abuse and will deal with it. So send them a polite email informing them of the activity. Don't get hostile (yet).

Most often the 'from' and 'message ID' fields might (probably) are forged, so use words like 'appears to be from your site' when complaining about the spam. But do complain whenever you get spam.

2- Send a message quoting the spam (with all message headers) to 'postmaster' at the sending site ('from' or 'message ID'), and stating that spam/UCE is unwelcome, unwanted, and request that they terminate the account of the sender. You might also send the complaint message to abuse@whoeversentit, or root@whoeversentit.

Be polite. Just tell them that you do not appreciate spam. Spam costs your ISP money, wastes your time, and is an intrusion on your privacy. Unlike postal junk mail (which the sender pays for), spam costs you or your ISP money.

Some spam has a 'REMOVE' address to respond to get off their list. Don't do it. Responding to the spammer this way only validates your email address and insures that you will get more UCE/spam.

Anyway, the recent spam, assuming that the 'from' field is not forged, reveals the following information: Probably someone at Oregon State university sent

the spam. Write email to the addresses below (polite, remember the address Might be forged) stating your hatred for USE/spam.

#### ACME Address Digger Results

##### Oregon State University (ORST-DOM)

Milne 213

Corvallis, OR 97331-5202

Domain Name: ORST.EDU

Administrative Contact:

Myers, William (WM1443) myers@NET.ORST.EDU (mc send email)  
541-737-4742

Technical Contact, Zone Contact:

Stump, Kean (KS190) kean@NET.ORST.EDU (mc send email)  
(541) 737-4740 (FAX) (541) 737-4484

Billing Contact:

Stark, Todd (TS2519) starkt@CCMAIL.ORST.EDU (mc send email)  
(541)737-0456 (FAX) (541)737-4484

Record last updated on 01-Aug-97.

Record created on 18-Aug-87.

Database last updated on 30-Sep-97 05:07:43 EDT.

Domain servers in listed order:

|                        |               |
|------------------------|---------------|
| ORSTSERV3.NWS.ORST.EDU | 128.193.4.20  |
| DNSMAN.OCE.ORST.EDU    | 128.193.64.33 |
| DNS.UCAR.EDU           | 192.52.106.6  |
| RS0.INTERNIC.NET       | 198.41.0.5    |

The InterNIC Registration Services Host contains ONLY Internet Information (Networks, ASN's, Domains, and POC's).

Please use the whois server at nic.ddn.mil for MILNET Information.

Please! The address Might be forged, so do not be abusive. The net administrator will be glad to know of the problem, the the sender of the spam is probably just ignorant of net manners.

If you want to know know more about how to find spammers, check out alt.stop.spamming, [www.samspace.com](http://www.samspace.com), [www.internic.com](http://www.internic.com)

Thanks, Bill k7ea Long live Ham Radio and Morse!!!!!!!!!!!!

---

## 2. Re: [NETSIG:3387] Here It Is !!

From: rmackay@bud.peinet.pe.ca (Ron VE1AIC)  
Date: Wed, 1 Oct 1997 08:16:25 -0300 (ADT)  
To: netsig@tapr.org  
Message-ID: <199710011116.IAA14784@bud.peinet.pe.ca>  
Rendered body type: text/plain

>Selective Marketing has your answer for doing business on the Internet. You can improve your Internet business

> by as much as 150% in the next 48 hours. What you are about to read has never been done on the Internet before.

> We are actually giving away over \$750.00 in Internet promotional software. Please read for details.

>

>For a limited time you can purchase over 37 million e-mail addresses on CD Rom for only \$349.00. When you purchase

>this software you will receive over\$750.00 in Internet Promotional Software. That's right, when you purchase our CD Rom

>with over 37 million e-mail addresses on it you will receive a mass mailing program for sending your e-mail messages and

>an e-mail extraction program that will extract targeted e-mail addresses while you sleep. The mailing program can send from

>100,000 to 500,000 e-mails per hour.

>

>We can also submit your Web Site to over 250 of the top search engines for the unbelievable price of only \$69.00.

> You pick the keywords and we do the rest. Instant submission. You will receive confirmation from the search engines

> webmaster confirming that your site was registered.

>

>If you would like we will even do the direct e-mail marketing for your Web Site, Multi-level program, product, or service for you. Please call for rates.

>

>If you would like more information concerning any of our services or  
>products please call us at (904) 779-1721.  
>  
>  
>

---

### 3. Problem connecting to X1J4

From: Bob Nielsen <nielsen@primenet.com>  
Date: Thu, 2 Oct 1997 09:15:31 -0700 (MST)  
To: netsig@tapr.org  
Cc: tcpaz@azgate.n7oo.ampr.org, Chuck Michels <kb7rfi@theriver.com>  
Message-ID: <Pine.LNX.3.96.971002090451.728A-100000@nielsen.tus.primenet.com>  
Rendered body type: text/plain

We recently put up a Thenet X1J4 node here and it puts out its node  
broadcast fine, but attempts to connect to it fail. Here is a trace of  
what occurs:

[Thu Oct 2 09:01:48 1997]  
Port radio: AX25: W6SWE-3->KB7RFI-5 <C C P>

[Thu Oct 2 09:01:49 1997]  
Port radio: AX25: KB7RFI-5->W6SWE-3 <UA R F>

[Thu Oct 2 09:01:49 1997]  
Port radio: AX25: W6SWE-3->KB7RFI-5 <I C S0 R0> pid=NET/ROM  
NET/ROM: W6SWE-3->KB7RFI-5 ttl 15  
conn rqst: ckt 1/7 wnd 4 W6SWE@W6SWE-3 timeout 120

[Thu Oct 2 09:01:52 1997]  
Port radio: AX25: KB7RFI-5->W6SWE-3 <RR R R1>

This is followed by a few acks back and forth, then the cycle restarts.

Has anyone ever seen this before or have a clue as to what might be wrong?

Bob

-----  
Bob Nielsen                      Internet: nielsen@primenet.com  
Tucson, AZ                      AMPRnet: w6swe@w6swe.ampr.org  
                                 http://www.primenet.com/~nielsen

---

### 4. Re: Problem connecting to X1J4

From: "Karl F. Larsen" <k5di@WHC.NET>  
Date: Fri, 03 Oct 1997 05:39:42 -0600  
To: Bob Nielsen <nielsen@primenet.com>  
Cc: netsig@tapr.org, tcpaz@azgate.n7oo.ampr.org,  
Chuck Michels <kb7rfi@theriver.com>  
Message-ID: <3434D97E.6B15@whc.net>  
Rendered body type: text/plain

Bob Nielsen wrote:

>  
> We recently put up a Thenet X1J4 node here and it puts out its node  
> broadcast fine, but attempts to connect to it fail. Here is a trace of  
> what occurs:  
>  
> [Thu Oct 2 09:01:48 1997]  
> Port radio: AX25: W6SWE-3->KB7RFI-5 <C C P>  
>  
> [Thu Oct 2 09:01:49 1997]  
> Port radio: AX25: KB7RFI-5->W6SWE-3 <UA R F>  
>  
> [Thu Oct 2 09:01:49 1997]  
> Port radio: AX25: W6SWE-3->KB7RFI-5 <I C S0 R0> pid=NET/ROM  
> NET/ROM: W6SWE-3->KB7RFI-5 ttl 15  
> conn rqst: ckt 1/7 wnd 4 W6SWE@W6SWE-3 timeout 120  
>  
> [Thu Oct 2 09:01:52 1997]  
> Port radio: AX25: KB7RFI-5->W6SWE-3 <RR R R1>  
>  
> This is followed by a few acks back and forth, then the cycle restarts.  
>  
> Has anyone ever seen this before or have a clue as to what might be wrong?  
>  
> Bob  
>

> ----  
> Bob Nielsen Internet: nielsen@primenet.com  
> Tucson, AZ AMPRnet: w6swe@w6swe.ampr.org  
> http://www.primenet.com/~nielsen

Hi Bob, that is an interesting problem. I think it must be that you have one or more setup parameters wrong. I'm trying to recall, but I know you can do a hard reset remote, but since you can't connect that is not an option.

Is this node in a node stack? You don't have a hardware problem it seems. Wierd. I have many x1j-4 nodes and they work fine as netrom and routers.

--  
73, de Karl aka k5di

Karl F. Larsen Box 74, Mesilla Park, NM 88047 (505) 524-3303  
k5di@k5di.cruces.nm.usa.noam k5di@whc.net

---

## 5. Re: [NETSIG:3394] Re: Problem connecting to X1J4

From: "Tom Vavra" <wb8zrl@inav.net>  
Date: Sat, 4 Oct 1997 12:31:49 +0000  
To: netsig@tapr.org  
Message-ID: <199710041234.HAA12367@solli.inav.net>  
Rendered body type: text/plain

> Bob Nielsen wrote:  
> >  
> > We recently put up a Thenet X1J4 node here and it puts out its node  
> > broadcast fine, but attempts to connect to it fail. Here is a trace of  
> > what occurs:  
> >  
> > [Thu Oct 2 09:01:48 1997]  
> > Port radio: AX25: W6SWE-3->KB7RFI-5 <C C P>  
> >  
> > [Thu Oct 2 09:01:49 1997]  
> > Port radio: AX25: KB7RFI-5->W6SWE-3 <UA R F>  
> >  
> > [Thu Oct 2 09:01:49 1997]  
> > Port radio: AX25: W6SWE-3->KB7RFI-5 <I C S0 R0> pid=NET/ROM  
> > NET/ROM: W6SWE-3->KB7RFI-5 ttl 15  
> > conn rqst: ckt 1/7 wnd 4 W6SWE@W6SWE-3 timeout 120  
> >  
> > [Thu Oct 2 09:01:52 1997]  
> > Port radio: AX25: KB7RFI-5->W6SWE-3 <RR R R1>  
> >  
> > This is followed by a few acks back and forth, then the cycle restarts.  
> >  
> > Has anyone ever seen this before or have a clue as to what might be wrong?  
> >  
> > Bob  
> >  
> > ----  
> > Bob Nielsen Internet: nielsen@primenet.com  
> > Tucson, AZ AMPRnet: w6swe@w6swe.ampr.org  
> > http://www.primenet.com/~nielsen

KB7RFI-5 will act precisely like this if it cannot add another call to its table holding the ROUTE calls. It won't be able to treat W6SWE-3 as a node.

Tom WB8ZRL

---

## 6. Re: [NETSIG:3393] Problem connecting to X1J4

From: Thomas I Mathewson <"tommath"@norwich.net>  
Date: Tue, 07 Oct 1997 05:42:27 -0700  
To: netsig@tapr.org  
Message-ID: <199710070548.BAA27758@ns.norwich.net>  
Rendered body type: text/plain

Bob Nielsen wrote:  
>  
> We recently put up a Thenet X1J4 node here and it puts out its node  
> broadcast fine, but attempts to connect to it fail. Here is a trace of  
> what occurs:  
>  
> [Thu Oct 2 09:01:48 1997]  
> Port radio: AX25: W6SWE-3->KB7RFI-5 <C C P>

```

>
> [Thu Oct 2 09:01:49 1997]
> Port radio: AX25: KB7RFI-5->W6SWE-3 <UA R F>
>
> [Thu Oct 2 09:01:49 1997]
> Port radio: AX25: W6SWE-3->KB7RFI-5 <I C S0 R0> pid=NET/ROM
> NET/ROM: W6SWE-3->KB7RFI-5 ttl 15
> conn rqst: ckt 1/7 wnd 4 W6SWE@W6SWE-3 timeout 120
>
> [Thu Oct 2 09:01:52 1997]
> Port radio: AX25: KB7RFI-5->W6SWE-3 <RR R R1>
>
> This is followed by a few acks back and forth, then the cycle restarts.
>
> Has anyone ever seen this before or have a clue as to what might be wrong?
>
> Bob
>
> ----
> Bob Nielsen Internet: nielsen@primenet.com
> Tucson, AZ AMPRnet: w6swe@w6swe.ampr.org
> http://www.primenet.com/~nielsen

```

Hi Bob;  
You did not say if this was a hash node or a user port node.  
If it is a hash node you have to lock in the route to its neighbor.  
I invite you to check out this web site:  
<http://www.cam.org/~burt/neda/neda.html>

This is the site of The Northeast Digital Assoac. or N.E.D.A.  
Here you will find all sorts of neat stuff rregarding X1J r4.  
73 and I hope this helps.  
Tom KA2MYD

---

## 7. AMRAD meeting Thur of DCC

```

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Tue, 7 Oct 1997 09:59:17 -0500
To: "TAPR-BB list mailing" <tapr-bb@tapr.org>, " tacgps " <tacgps@tapr.org>,
    " Spread Spectrum " <ss@tapr.org>,
    "NETSIG list mailing" <netsig@tapr.org>,
    "HF SIG list mailing" <hfsig@tapr.org>
Message-ID: <v03110708b05ffe1db177@208.134.134.40>
Rendered body type: text/plain

```

Participants in the 1997 Digital Communications Conference are invited to attend the regular monthly meeting of the Amateur Radio Research and Development club (AMRAD), Thursday evening at 7:30 PM in the lower meeting room of the Dolley Madison Branch Library, McLean, Virginia. The library is located near the intersection of VA Rte 123 (Dolley Madison Blvd) and Old Dominion Drive.

This month's meeting is devoted to the "dc" band of anywhere from 73 kHz to 190 kHz. ARRL has stated an amateur requirement for access to a low-frequency band and NTIA has accepted the justification. There are still many steps needed to acquire the band but interest is building among experimenters. American LF advocates are watching activities in Europe where CEPT is planning a "harmonised" band around 143 kHz.

Bob Laney will be one of the (informal) speakers for this Thursdays meeting. He has a wonderful LF set-up and is even a fan of amateur seismology. He'll be bringing photos and share his experiences in the LF arena.

---

## 8. MFJ1270C Node help

```

From: Thomas I Mathewson <"tommath"@norwich.net>
Date: Fri, 10 Oct 1997 01:57:28 -0700
To: NETSIG@tapr.org
Message-ID: <199710100203.WAA29703@ns.norwich.net>
Rendered body type: text/plain

```

Hello to all!

Our club has a problem that we need some help with.  
We have a four port node stack using the MFJ-120C TNC running X1J rev 4 firmware.  
All was fine up to about 2 months ago. One of the TNC's decided it wouldf no longer talk to the rest of the stack.  
You can connect to it, either via radio or serial port.



It just does not want to give out any nodes broadcasts, or anything that it is supposed to. Now comes the kicker These TNC's have been in service for about three years. Yes I said 3 years. Now we have a couple more in the sdame stack doing about the same thing. Anyone have any ideas?  
73 Tom KA2MYD

---

## 9. Re: [NETSIG:3398] MFJ1270C Node help

From: "Rod Fowler (afa1nc)" <k2adj@mosquito.com>  
Date: Fri, 10 Oct 1997 01:00:46 -0400 (EDT)  
To: netsig@tapr.org  
Message-ID: <2.2.16.19971010005929.302fa782@mosquito.com>  
Rendered body type: text/plain

At 08:59 PM 10/9/97 -0500, you wrote:  
>Hello to all!  
>  
>Our club has a problem that we need some help with.  
>We have a four port node stack using the MFJ-120C TNC  
>running X1J rev 4 firmware.  
>All was fine up to about 2 months ago. One of the TNC's  
>decided it wouldf no longer talk to the rest of the stack.  
>You can connect to it, either via radio or serial port.

Hi Tom,

I too have run into the same problem with our local stack and a software RESET will or should cure your problem.. In fact, connect to the NODE and send it a "P" to look at the parameter string and you will find some of those little 3 digit numbers at the beginning of the line are now 5 digits long!

73 de Rod

---

## 10. Re: [NETSIG:3398] MFJ1270C Node help

From: Sid Ashen-Brenner <sashen@midusa.net>  
Date: Fri, 10 Oct 1997 00:29:36 -0500  
To: netsig@tapr.org  
Message-ID: <3.0.32.19971010002911.00689920@midusa.net>  
Rendered body type: text/plain

At 08:59 PM 10/9/97 -0500, you wrote:  
>Hello to all!  
>  
>Our club has a problem that we need some help with.  
>We have a four port node stack using the MFJ-120C TNC  
>running X1J rev 4 firmware.  
>All was fine up to about 2 months ago. One of the TNC's  
>decided it wouldf no longer talk to the rest of the stack.  
>You can connect to it, either via radio or serial port.  
>It just does not want to give out any nodes broadcasts, or  
>anything that it is supposed to. Now comes the kicker  
>These TNC's have been in service for about three years.  
>Yes I said 3 years. Now we have a couple more in the sdame stack  
>doing about the same thing.  
>Anyone have any ideas?  
>73 Tom KA2MYD

How's the power at the node site? When was the last time the battery in the TNC's were replaced? Just a thought.

73 de Sid n0obm

Sid Ashen-Brenner Salina, Ks. Monitor Service Co.  
Internet : sashen@midusa.net  
AX-25 : n0obm @ n0obm.#ncks.ks.usa.noam

---

## 11. still subscribed?

From: "Charles E. Gelm" <gelmc@erinet.com>  
Date: Tue, 14 Oct 1997 08:48:23 -0700  
To: netsig@tapr.org  
Message-ID: <34439447.2AAA@erinet.com>  
Rendered body type: text/plain

Hello:

I haven't received a post since 9/6/97. Am I still subscribed?

Chuck

## 12. (no subject)

From: Gary Suddreth <kd4ytu@wp.cc.nc.us>  
Date: Thu, 16 Oct 1997 16:58:37 -0400 (EDT)  
To: netsig@tapr.org  
Message-ID: <Pine.LNX.3.95.971016165420.31284C-100000@sisko.se.wp.cc.nc.us>  
Rendered body type: text/plain

I am doing a report for a Computer Science class on routing protocols for radio. Are there any "standard documents" (ie. RFC's) describing the various routing algorithms for amateur radio and/or cellular telephone that I can obtain?

Thanks

|  |                                             |  |
|--|---------------------------------------------|--|
|  | Gary M. Suddreth - KD4YTU                   |  |
|  | Division of Natural Science and Engineering |  |
|  | Western Piedmont Community College          |  |
|  | 1001 Burkemont Ave, Morganton, NC 28655     |  |
|  | Ph: (704)-438-6147 Fax: (704)-438-6015      |  |
|  | e-mail: kd4ytu@wp.cc.nc.us                  |  |

## 13. Re: [NETSIG:3402]

From: Jan Marius Evang <jane@ifi.uio.no>  
Date: 17 Oct 1997 03:27:33 +0200  
To: netsig@tapr.org  
Message-ID: <xmlvhyxi3ga.fsf@hrotti.ifi.uio.no>  
Rendered body type: text/plain

>> Gary Suddreth writes:

GS> I am doing a report for a Computer Science class on routing  
GS> protocols for radio. Are there any "standard documents" (ie.  
GS> RFC's) describing the various routing algorithms for amateur  
GS> radio and/or cellular telephone that I can obtain? Thanks

The NET/ROM protocol is very well documented, and I have the complete documentation somewhere at home. I don't think it is an "Internet RFC" though. TCP/IP Routing is probably well documented in an RFC somewhere. FlexNet routing, I think will be some work to find.

MArius LC1MAT

--  
-0        /\ \ | Jan Marius Evang | Ladonia became independent in June  
Røyskatt 0 0 \ | Greve av Ling | 1996 and is a remony with a Queen  
          \ /\ | /In Aurum Veritas/ | <http://www.aim.se/ladonia/>

## 14. RE: [NETSIG:3402]

From: "Hast, Chuck" <wchast@utilpart.com>  
Date: Fri, 17 Oct 1997 08:56:11 -0400  
To: "'netsig@tapr.org'" <netsig@tapr.org>  
Message-ID: <c=US%a=\_%p=Utility\_Partner'%l=UPOPS-971017125611Z-1407@upops.utilpart.com>  
Rendered body type: text/plain

ROSE/FPAC is X.25 based, the addressing is based on X.121, all of these standards are very well documented. In fact Johnathan Naylor in the UK has written a LINUX version of this network system based on a ITU standards CD ROM.

>-----  
>From: Gary Suddreth[SMTP:kd4ytu@wp.cc.nc.us]  
>Sent: Thursday, 16 October, 1997 17:33  
>To: netsig@tapr.org  
>Subject: [NETSIG:3402]  
>  
>  
>I am doing a report for a Computer Science class on routing protocols  
>for  
>radio. Are there any "standard documents" (ie. RFC's) describing the  
>various routing algorithms for amateur radio and/or cellular telephone  
>that I can obtain?  
>

Thanks

```
>
>
>
>| Gary M. Suddreth - KD4YTU |
>| Division of Natural Science and Engineering |
>| Western Piedmont Community College |
>| 1001 Burkemont Ave, Morganton, NC 28655 |
>| Ph: (704)-438-6147 Fax: (704)-438-6015 |
>| e-mail: kd4ytu@wp.cc.nc.us |
>
>
```

## 15. Here It Is !!

From: Selective.Marketing@ac-bordeaux.fr  
Date: Fri, 17 Oct 97 13:24:56 EST  
To: jlk@aol.com  
Message-ID: < >  
Rendered body type: text/plain

Selective Marketing has your answer for doing business on the Internet. You can improve your Internet business by as much as 150% in the next 48 hours. What you are about to read has never been done on the Internet before.  
We are actually giving away over \$750.00 in Internet promotional software. Please read for details.

For a limited time you can purchase over 37 million e-mail addresses on CD Rom for only \$349.00. When you purchase this software you will receive over \$750.00 in Internet Promotional Software. That's right, when you purchase our CD Rom with over 37 million e-mail addresses on it you will receive a mass mailing program for sending your e-mail messages and an e-mail extraction program that will extract targeted e-mail addresses while you sleep. The mailing program can send from 100,000 to 500,000 e-mails per hour.

We can also submit your Web Site to over 250 of the top search engines for the unbelievable price of only \$69.00.  
You pick the keywords and we do the rest. Instant submission. You will receive confirmation from the search engines webmaster confirming that your site was registered.

If you would like we will even do the direct e-mail marketing for your Web Site, Multi-level program, product, or service for you. Please call for rates.

If you would like more information concerning any of our services or products please call us at (904) 908-5444.

## 16. Recent Spam to Mailing List

From: Bill <wbradoink@ix.netcom.com>  
Date: Sat, 18 Oct 1997 21:50:08 -0700  
To: Vincent.Gillet@inria.fr  
Cc: rensyp@renater.fr, rensyp@renater.fr, Annie.Renard@inria.fr, guradian@xlink.net, netsig@tapr.org  
Message-ID: <34499180.621C@ix.netcom.com>  
Rendered body type: text/plain

Below is recent spam to a technical mailing list, apparently from your site. If this is in error, please accept apologies. Otherwise, we would appreciate your immediate efforts to cancel the sender's account and help prevent this type of spam. If your address has been forged, please let me know and I will do all I can to stop the culprit.  
wbradoink@ix.netcom.com (remove the oink to get my real address)

Now the spam: >>>>>>>>>

From: IN%"netsig@tapr.org" 18-OCT-1997 17:57:28.43  
NETSIG Digest 703  
Topics covered in this issue include:  
1) Here It Is !!  
by Selective.Marketing@ac-bordeaux.fr  
Date: Fri, 17 Oct 97 13:24:56 EST  
From: Selective.Marketing@ac-bordeaux.fr  
To: jlk@aol.com  
Subject: Here It Is !!  
Message-ID: < >

Selective Marketing has your answer for doing business on the Internet.  
You can  
improve your Internet business

by as much as 150% in the next 48 hours. What you are about to read has never been done on the Internet before. We are actually giving away over \$750.00 in Internet promotional software. Please read for details.

For a limited time you can purchase over 37 million e-mail addresses on CD Rom for only \$349.00. When you purchase  
<snip crap>  
If you would like we will even do the direct e-mail marketing for your Web Site, Multi-level program, product, or service for you. Please call for rates.

If you would like more information concerning any of our services or products please call us at (904) 908-5444.

End of NETSIG Digest 703

---

## 17. Re: [NETSIG:3405] Here It Is !!

From: Paul A Beltrani <beltrani@hawaii.edu>  
Date: Sun, 19 Oct 1997 13:14:27 -1000  
To: netsig@tapr.org  
Message-ID: <Pine.GS0.3.95q.971019130822.23633A-100000@uhunix4>  
Rendered body type: text/plain

Once again it someone has seen fit to spam this list and forge their return address. This is something no reputable business would do. If someone in area code 904 would please get their REAL email address, we can complain directly to their ISP and/or upstream provider.

- Paul Beltrani

---

## 18. Re: [NETSIG:3405] Here It Is !!

From: RJBRIEDE@yvas.dialix.oz.au (ROBERT J BRIEDE)  
Date: Mon, 20 Oct 1997 08:22:15  
To: Selective.Marketing@ac-bordeaux.fr, netsig@tapr.org, netsig@tapr.org  
Message-ID: <199710200034.KAA12736@melbourne.dialix.com.au>  
Rendered body type: text/plain

> Date sent: Sat, 18 Oct 1997 09:37:19 -0500 (CDT)  
> Send reply to: netsig@tapr.org  
> From: Selective.Marketing@ac-bordeaux.fr  
> To: netsig@tapr.org  
> Subject: [NETSIG:3405] Here It Is !!

> Selective Marketing has your answer for doing business on the Internet. You can improve your Inter  
> by as much as 150% in the next 48 hours. What you are about to read has never been done on the In  
> We are actually giving away over \$750.00 in Internet promotional software. Please read for detail  
>  
> For a limited time you can purchase over 37 million e-mail addresses on CD Rom for only \$349.00. W  
> this software you will receive over \$750.00 in Internet Promotional Software. That's right, when yo  
> with over 37 million e-mail addresses on it you will receive a mass mailing program for sending yo  
> an e-mail extraction program that will extract targeted e-mail addresses while you sleep. The mail  
> 100,000 to 500,000 e-mails per hour.  
>  
> We can also submit your Web Site to over 250 of the top search engines for the unbelievable price  
> You pick the keywords and we do the rest. Instant submission. You will receive confirmation from  
> webmaster confirming that your site was registered.  
>  
> If you would like we will even do the direct e-mail marketing for your Web Site, Multi-level progr  
>  
> If you would like more information concerning any of our services or products please call us at (9  
>

Please stop wasting my time by sending so much nonsense and garbage to me. If I wanted to get rich I would get a job. You are very stupid if you think that people will believe this garbage. Besides you have already broken three Australian laws by me reading this. Good riddance to you and your pathetic excuse for email, it is people like you who make up for the slowness of the internet!!

=====

Robert Briede  
Managing Director, K.E.B. Design  
Phone : 015857051  
RJBRIEDE@yvas.dialix.oz.au

=====

-----

## 19. Re: [NETSIG:3405] Here It Is !!

From: RJBRIEDE@yvas.dialix.oz.au (ROBERT J BRIEDE)  
Date: Mon, 20 Oct 1997 08:22:15  
To: Selective.Marketing@ac-bordeaux.fr, netsig@tapr.org, netsig@tapr.org  
Message-ID: <199710200034.KAA12733@melbourne.dialix.com.au>  
Rendered body type: text/plain

> Date sent: Sat, 18 Oct 1997 09:37:19 -0500 (CDT)  
> Send reply to: netsig@tapr.org  
> From: Selective.Marketing@ac-bordeaux.fr  
> To: netsig@tapr.org  
> Subject: [NETSIG:3405] Here It Is !!

> Selective Marketing has your answer for doing business on the Internet. You can improve your Inter  
> by as much as 150% in the next 48 hours. What you are about to read has never been done on the In  
> We are actually giving away over \$750.00 in Internet promotional software. Please read for detail  
>  
> For a limited time you can purchase over 37 million e-mail addresses on CD Rom for only \$349.00. W  
> this software you will receive over \$750.00 in Internet Promotional Software. That's right, when yo  
> with over 37 million e-mail addresses on it you will receive a mass mailing program for sending yo  
> an e-mail extraction program that will extract targeted e-mail addresses while you sleep. The mail  
> 100,000 to 500,000 e-mails per hour.  
>  
> We can also submit your Web Site to over 250 of the top search engines for the unbelievable price  
> You pick the keywords and we do the rest. Instant submission. You will receive confirmation from  
> webmaster confirming that your site was registered.  
>  
> If you would like we will even do the direct e-mail marketing for your Web Site. Multi-level progr  
>  
> If you would like more information concerning any of our services or products please call us at (9  
>

Please stop wasting my time by sending so much nonsense and garbage  
to me. If I wanted to get rich I would get a job. You are very stupid  
if you think that people will believe this garbage. Besides you have  
already broken three Australian laws by me reading this. Good riddance  
to you and your pathetic excuse for email, it is people like you who  
make up for the slowness of the internet!!

=====

Robert Briede  
Managing Director, K.E.B. Design  
Phone : 015857051  
RJBRIEDE@yvas.dialix.oz.au

=====

-----

## 20. spam update

From: WBRADFORD@delphi.com  
Date: Sun, 19 Oct 1997 21:58:10 -0400 (EDT)  
To: netsig@tapr.org  
Message-ID: <01IP08MGUC9E92NU9N@delphi.com>  
Rendered body type: text/plain

I won't burden the list with more off topic stuff, but just one follow-up to  
the spam message we received a few days ago. I posted the spam on  
alt.stop.spamming, and here is what one good soul has found out and done.  
Please note his admonition that the culprit is not confirmed yet (only about  
99% so).

Newsflag: alt.stop.spamming  
From: dfrntdrums  
Newsgroups: alt.stop.spamming  
Subject: Re: Help find creep

>Please help stop this creep spamming favorite lists.  
>The message:  
>From: IN%"netsig@tapr.org" 18-OCT-1997 17:57:28.43  
>                   NETSIG Digest 703  
>  
>Topics covered in this issue include:  
> 1) Here It Is !!  
>       by Selective.Marketing@ac-bordeaux.fr  
>Date: Fri, 17 Oct 97 13:24:56 EST  
>From: Selective.Marketing@ac-bordeaux.fr  
>To: jlk@aol.com  
>Subject: Here It Is !!  
>Message-ID: < >

Here says dfrntdrums:

Okay, this Mega-Creep has been sending me about 20 spams a day since yesterday. He claims to be (varies between e-mails) either Selective

Marketing@ac-bordeaux.fr, Selective Marketing@biaa.sinica.edu.tw, Selective Marketing@whitman.edu, or Selective Marketing@eiu.edu. I've done some research and found the webmasters of all four sites (which are all educational sites):

mpc@biaa.sinica.edu.tw  
webmaster@eiu.edu  
cwis@whitman.edu  
mandy@rectorat.ac-bordeaux.fr

All four have been forwarded copies of his spam (along with AOL, as he also uses an AOL list name) along with an explanation of what he is doing.

I've also been told that this guy's name and address are:  
Chris Brown  
7755 Allspice Circle E  
Jacksonville, FL 33244

But keep in mind that I have NOT CONFIRMED THIS INFORMATION ABOUT HIS IDENTITY TO BE TRUE!

I would suggest forwarding copies of every spam you receive (newsgroup or e-mail) to the webmaster of the referenced domain and abuse@aol.net. Eventually the amount of complaints may cause SOMEBODY in authority to actually do something about it.

(end dfrntdrum comments)

73 to all, and I look forward to reading the Real netsig postings.  
Bill K7EA Salt Lake City

---

## 21. Re: [NETSIG:3410] spam update

From: Marvin Munster <mmunster@qualcomm.com>  
Date: Tue, 21 Oct 1997 08:15:29 -0700  
To: netsig@tapr.org, netsig@tapr.org  
Message-ID: <3.0.1.32.19971021081529.00b12a70@houdini.qualcomm.com>  
Rendered body type: text/plain

Be careful about how you get rid of SPAM. There are notices on most SPAM messages that tell you to send them a note and they won't send you any more unwanted SPAM. Well... that is true to one sense. They don't send you anymore, but they have just confirmed that you are a real and live address and they collect these and sell them to the SPAM mailing list sellers.

I have been having one heck of a time getting rid of these things. I have stopped replying to the "get me off the list" stuff about 6 months ago, and slowly the SPAM is decreasing. Fortunately, I use EUDORA PRO and am able to filter this stuff to the trash. So far, the easiest way is to send anything that contains From: <anything>@aol to the trash bin. This has worked pretty well.

Marvin - WB6PKK

At 08:25 PM 10/20/97 -0500, WBRADFORD@delphi.com wrote:  
>I won't burden the list with more off topic stuff, but just one follow-up to  
>the spam meassge we received a few days ago. I posted the spam on  
>alt.stop.spamming, and here is what one good soul has found out and done.  
>Please note his admonition that the culprit is not confirmed yet (only about

>99% so).  
>  
>Newsflag: alt.stop.spamming  
>From: dfrntdrums  
>Newsgroups: alt.stop.spamming  
>Subject: Re: Help find creep  
>  
>SPAM SNIP...

---

## 22. Recent Spamming

From: RJBRIEDE@yvas.dialix.oz.au (ROBERT J BRIEDE)  
Date: Wed, 22 Oct 1997 08:42:27  
To: netsig@tapr.org  
Message-ID: <199710212305.JAA10954@melbourne.dialix.com.au>  
Rendered body type: text/plain

Just like to say sorry for the inconvenience that I hav caused with my reply. I don't know why it appeared so many times, but I only sent off the message once. I got the message from WBRADFORD@delphi.com and am following this up. Thankyou for your support and sorry fro the trouble I have caused. I have learnt my lesson in regards to spamming.

=====  
Robert Briede  
Managing Director, K.E.B. Design  
Phone : 015857051  
RJBRIEDE@yvas.dialix.oz.au  
=====

---

## 23. Re: [NETSIG:3412] Recent Spamming

From: Doug Younker <dougy@mail.ruraltel.net>  
Date: Thu, 23 Oct 1997 10:45:13 -0700  
To: netsig@tapr.org  
Message-ID: <344F8D29.2940@mail.ruraltel.net>  
Rendered body type: text/plain

Robert,

If you felt I was attacking you for your reply to the SIG in regards to the concerning the spam, I apologize, that was not my intent. I was merely wanting to state an observation that I find is true.

You had stated that person who distributed the spam had broken Australian law. Unfortunately the U.S. lags severely in addressing new technology problems. there is an organization cauce dedicated to remedy that. I believe they maintain a site at <http://www.cauce.org>

--  
73, Doug Younker, N0LKK  
near Plainville, KS  
dougy@ruraltel.net  
=====

ROBERT J BRIEDE wrote:

>  
> Just like to say sorry for the inconvenience that I hav caused with  
> my reply. I don't know why it appeared so many times, but I only sent  
> off the message once. I got the message from WBRADFORD@delphi.com and  
> am following this up. Thankyou for your support and sorry fro the  
> trouble I have caused. I have learnt my lesson in regards to spamming.  
>  
>  
> =====  
> Robert Briede  
> Managing Director, K.E.B. Design  
> Phone : 015857051  
> RJBRIEDE@yvas.dialix.oz.au

---

# November 1997

Original source file: netsig.9711

Source: [http://ftp.tapr.org/tapr\\_history/SIG\\_Archives/netsig/mail\\_archive/netsig.9711](http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.9711)

## 1. New Packet Radio Modem

From: nico.pal@nettuno.it (Nico Palermo) (by way of Greg Jones, WD5IVD)  
Date: Sat, 1 Nov 1997 13:40:03 -0600  
To: "NETSIG list mailing" <netsig@tapr.org>  
Message-ID: <v0311071fb081360e2f2e@[208.134.134.40]>  
Rendered body type: text/plain

Hello Greg,  
I've designed a new packet radio modem (based on a cheap field programmable gate array).  
For now the modem it's just a "G3RUH" but a new much faster release with almost the same hardware is under development.

You can find the whole project documentation at:

<http://www.microlet.com/yam/>

Maybe you will find it interesting and add a link in the TAPR Packet Radio Home Page.

All the best and 73s de

nico - IV3NWV

---

Nico Palermo  
e-mail: nico.pal@microlet.com  
packet: IV3NWV@IV3AVQ.IFVG.ITA.EU

## 2. Packet Engine support for Baycom Serial,DRSI and USCC

From: "(SV2AGW) George Rossopoylos" <sv2agw@the.forthnet.gr>  
Date: Tue, 11 Nov 1997 10:57:27 +0200  
To: <netsig@tapr.org>  
Message-ID: <199711110757.JAA01253@nefeli.forthnet.gr>  
Rendered body type: text/plain

New versions for AGW Packet Engine (WIN95).  
Now i support all external tncs with kiss (SImpleKiss,extended kiss,Smack kiss).  
Baycom serial modems for 1200,2400 You can have 2 at the same time  
Baycom USCC cards 2 ports and 4 ports  
DRSI cards up to 4 deifferent sharing the same irq.

Of course you can have any combination of the above up to 100 different ports (!!!)

73

George Rossopoulos  
e-mail:sv2agw@the.forthet.gr  
packet:SV2AGW@SV2DXC.TSL.GRC.EU  
<http://www.forthnet.gr/sv2agw/>  
<http://www.intranet.gr/isefi/rossopou/rossopou.htm>

## 3. Re> Where is Packet Engine?

From: "(SV2AGW) George Rossopoylos" <sv2agw@the.forthnet.gr>  
Date: Wed, 12 Nov 1997 11:25:39 +0200  
To: <netsig@tapr.org>  
Message-ID: <199711130622.IAA20864@nefeli.forthnet.gr>  
Rendered body type: text/plain

Packet Engine and all other programs is in the follow URL  
<http://www.forthnet.gr/sv2agw/>

Press in the right panel the Download Button.  
Then Download AGWPE.ZIP and also DRIVERS.ZIP for latest device drivers.

73

George Rossopoulos  
e-mail:sv2agw@the.forthet.gr  
packet:SV2AGW@SV2DXC.TSL.GRC.EU  
<http://www.forthnet.gr/sv2agw/>



#### 4. Re: [NETSIG:3416] Re> Where is Packet Engine?

From: "Charles E. Gelm" <gelmc@erinet.com>  
Date: Sat, 22 Nov 1997 16:29:18 -0800  
To: netsig@tapr.org  
Message-ID: <347778DE.7A34@erinet.com>  
Rendered body type: text/plain

Hi, George:

I went to  
<http://www.forthnet.gr/sv2agw/>  
but I do not see a 'right panel' ?  
Please, no frames or panels; please just simple URL:  
Please no multiple pictures, they slow down my system  
and I then can go slowly or not at all.  
:-|

Chuck

(SV2AGW) George Rossopoylos wrote:

>  
> Packet Engine and all other programs is in the follow URL  
> <http://www.forthnet.gr/sv2agw/>  
>  
> Press in the right panel the Download Button.  
> Then Download AGWPE.ZIP and also DRIVERS.ZIP for latest device drivers.  
>  
> 73  
>  
> George Rossopoulos  
> e-mail:sv2agw@the.forthet.gr  
> packet:SV2AGW@SV2DXC.TSL.GRC.EU  
> <http://www.forthnet.gr/sv2agw/>  
> <http://www.intranet.gr/isefi/rossopou/rossopou.htm>

---

# December 1997

Original source file: netsig.9712

Source: [http://ftp.tapr.org/tapr\\_history/SIG\\_Archives/netsig/mail\\_archive/netsig.9712](http://ftp.tapr.org/tapr_history/SIG_Archives/netsig/mail_archive/netsig.9712)

## 1. Recovering Damaged Received Frames.

From: "(SV2AGW) George Rossopoylos" <sv2agw@the.forthnet.gr>  
Date: Fri, 5 Dec 1997 13:11:30 +0200  
To: <netsig@tapr.org>  
Message-ID: <199712051322.PAA07070@nefeli.forthnet.gr>  
Rendered body type: text/plain

I wrote ,the last months, 3 device drivers (WIN95) for Baycom (like) serial modems,DRSI and USCC cards, to interface my programs (Packet Engine) with that hardware.

Playing with the baycom driver i discovered that i could recover damaged received frames with simple algorithms and with no need for special encoding.(no modification to AX25).

What i did is the follow.

1.When a frame fails the CRC test i scan the frame changing the bytes value and running again the CRC test. e.g. I receive a frame with incorrect value at 5th byte. The 5th byte is 32 and should be 64. Changing the value for this byte when i reach the value of 64 the crc test pass and the frame is correct. This is a simple algorithm and works

2.The frames received can be divided in two general categories Monitoring frames and frames that are for us (for our connection). The first algorithm applies to both kind of frames. the second only to second. Lets see how it works with a small example.

I have (SV2AGW) a connection with SV2BB0. He sends me a file with YAPP and has maxframe 7.

SV2BB0 tx frame 0,1,2,3,4,5,6.

SV2AGW rcv frame 0 ok, frame 1 wrong, and all the others ok (2,3,4,5,6).

SV2AGW asks SV2BB0 to retx the frames

SV2BB0 tx now frame 1,2,3,4,5,6 and a new one.(the previous frames + a new one).

SV2AGW receives ok the 1 frame and wrong the 2 frame all the others ok.

Now SV2AGW should ask SV2BB0 to tx again the frames from 3 and more.

But the damaged received frame has already received in the first tx so here we can recover the damaged frame with the old correct frame.

So i store all the frames and when a frame fails the crc test i search to find the previous correct.

This is the first part of the algorithm.

Suppose now that we received the same frame twice damaged what can we do??

We scan the frames and suppose that the first frame has the 5th byte as 32 and the second frame the 5th byte as 20 and also the 10th byte in the first frame is 34 and in the second 56. Now we can exchange the bytes with different values and ,it is possible, to pass the crc test aone of the two frames.

This algorithm is rather complicate and may slow things down if there are a lot of errors.

Yesterday night i runn some statistics tests and the results are as follow.

1 test.

Total Received frames 280 (good and bad)

Damaged frames 7

Recovered 4.

2.test

Total Received frames 930 (good and bad)

Damaged frames 24

Recovered 7.

The tests are done only monitoring the channel. SV2TX received a YAPP file from SV2DXC.

This weekend i will do extensive tests with file transfers with my stations and not just monitoring and will post the results. So far the algorithms are implemented only in the Baycom device driver but evetually i include it also in the other device drivers for scc cards.

George Rossopoulos

e-mail:sv2agw@the.forthet.gr

packet:SV2AGW@SV2DXC.TSL.GRC.EU

<http://www.forthnet.gr/sv2agw/>

<http://www.intranet.gr/isefi/rossopou/rossopou.htm>

George Rossopoulos  
e-mail:sv2agw@the.forthet.gr  
packet:SV2AGW@SV2DXC.TSL.GRC.EU  
http://www.forthnet.gr/sv2agw/  
http://www.intranet.gr/isefi/rossopou/rossopou.htm

---

## 2. AGW new Device Driver

From: "(SV2AGW) George Rossopoylos" <sv2agw@the.forthnet.gr>  
Date: Thu, 18 Dec 1997 11:55:22 +0200  
To: <netsig@tapr.org>  
Message-ID: <199712180855.KAA22506@nefeli.forthnet.gr>  
Rendered body type: text/plain

I have just uploaded a new device driver for OE5DXL 9600 G3RUH compatible modem. That modem is like Baycom Serial for 1200. It costs , to build it, 10-15\$. Its performance is great. In fact is better than commercial products. In my site i have also the scematics and pcb boards for that modem. Also the DOS driver written by OE5DXL.

So far AGW Packet Engine supports the follow TNC types  
1. All external tncs with KISS mode (XKISS, SMACK KISS).  
2. DRSI cards  
3. Baycom USCC cards  
4. Baycom serial modems for 1200, 2400, (300?)  
5. Sound Cards with the PSA chipset  
6. OE5DXL 9600 G3RUH compatible Modem

Also now I include in the Drivers.zip file the new Baycom Serial Device Driver with Error Correction.

All the above are only for WIN95.  
My netx device driver will be for the YAM 9600 modem.

73

George Rossopoulos  
e-mail:sv2agw@the.forthet.gr  
packet:SV2AGW@SV2DXC.TSL.GRC.EU  
http://www.forthnet.gr/sv2agw/  
http://www.intranet.gr/isefi/rossopou/rossopou.htm

---

## 3. Gateway Resource List

From: Andrew Kukla <ve3mrm@interlog.com>  
Date: Fri, 19 Dec 1997 22:35:06 -0500  
To: netsig@tapr.org  
Message-ID: <3.0.4.16.19971219223506.2b87db38@mail.interlog.com>  
Rendered body type: text/plain

Who provides now the Gateway Resource List for the Packet Radio? It used to be run by MINNIE in Australia. I would appreciate getting a source address or whatever information is available.

73 de ve3mrm

ve3mrm@bbs.ve3sen.ampr.org

-----  
Andrew M. Kukla            Toronto, Ontario, Canada  
                             ve3mrm@interlog.com  
-----

---

## 4. Re: [NETSIG:3420] Gateway Resource List

From: Jim Moore <jcm7181@bp.usl.edu>  
Date: Sat, 20 Dec 1997 13:38:20 GMT  
To: netsig@tapr.org  
Message-ID: <199712201338.NAA15420@larry.wu3v.net>  
Rendered body type: text/plain

At 10:13 PM 12/19/1997 -0600, you wrote:

>  
>Who provides now the Gateway Resource List for the Packet Radio? It  
>used to be run by MINNIE in Australia. I would appreciate getting a  
>source address or whatever information is available.  
>  
>73 de ve3mrm  
>  
>ve3mrm@bbs.ve3sen.ampr.org  
>

> -----  
> Andrew M. Kukla            Toronto, Ontario, Canada  
>            ve3mrm@interlog.com  
> -----  
>  
>

Andrew it was moved a while back to <http://www.fuller.net>  
The password for the encap.txt file has been changed, so you  
will need to read the new files on the web server.  
Good luck de Jim WU3V

-----  
James C. Moore WU3V  
e-mail [jim@usl.edu](mailto:jim@usl.edu)

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## 5. Re: [NETSIG:3420] Gateway Resource List

From: Bob Nielsen <[nielsen@primenet.com](mailto:nielsen@primenet.com)>  
Date: Sat, 20 Dec 1997 08:22:18 -0700 (MST)  
To: Andrew Kukla <[ve3mrm@interlog.com](mailto:ve3mrm@interlog.com)>  
Cc: [netsig@tapr.org](mailto:netsig@tapr.org)  
Message-ID: <Pine.LNX.3.96.971220082106.311A-100000@nielsen.tus.primenet.com>  
Rendered body type: text/plain

On Fri, 19 Dec 1997, Andrew Kukla wrote:

>  
> Who provides now the Gateway Resource List for the Packet Radio? It  
> used to be run by MINNIE in Australia. I would appreciate getting a  
> source address or whatever information is available.

It is currently run by Jim Fuller, n7vmr ([n7vmr@fuller.net](mailto:n7vmr@fuller.net)).

Bob

-----  
Bob Nielsen                            Internet: [nielsen@primenet.com](mailto:nielsen@primenet.com)  
Tucson, AZ                            AMPRnet: [w6swe@w6swe.ampr.org](mailto:w6swe@w6swe.ampr.org)  
                                      <http://www.primenet.com/~nielsen>

---

## 6. Christmas Greetings

From: WBRADFORD@delphi.com  
Date: Sat, 20 Dec 1997 22:57:29 -0500 (EST)  
To: [netsig@tapr.org](mailto:netsig@tapr.org)  
Message-ID: <01IREWRKZCOI94DV59@delphi.com>  
Rendered body type: text/plain

Hello and best Holliday wishes to all Netsig subscribers.

I enjoy reading the digest version of the list, even though things have been pretty quiet lately. (Gad, remember when we had the extreme flaming wars going on, and the list had to be moderated??? I'm glad things have become more civil now, but I admit I do miss a 'good' discussion happening now and then). Special thanks to the folks @ TAPR who make this list (and all other TAPR stuff) possible. And note, they do it on a volunteer basis... No pay, just love of the Hobby.

To any of you morse/cw hams:

I invite all to participate in SKN (Straight Key Night) coming up in a week or so. Look at the recent QST issue for details. I'll be there with my 1928 'Union Pacific' key. See you on 40 or 80 meters.

73 from Bill K7EA Salt Lake City

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## 7. wa0ptv code ?

From: "Greg Jones, WD5IVD" <[wd5ivd@tapr.org](mailto:wd5ivd@tapr.org)>  
Date: Sat, 20 Dec 1997 23:57:32 -0600  
To: "BBS SIG list mailing" <[bbssig@tapr.org](mailto:bbssig@tapr.org)>,  
      "NETSIG list mailing" <[netsig@tapr.org](mailto:netsig@tapr.org)>  
Message-ID: <[v0313031db0c2600a2940@\[208.134.134.40\]](mailto:v0313031db0c2600a2940@[208.134.134.40])>  
Rendered body type: text/plain

Has anyone been playing with the broadcast protocol software that John has made available ?

I see that 400 people have viewed the page, but is anyone using it ?

<http://www.tapr.org/~wa0ptv>

-----  
Greg Jones, WD5IVD  
Austin, Texas  
wd5ivd@tapr.org  
<http://www.tapr.org/~wd5ivd>

From: PHallgar@aca.gov.au  
Date: 22 DEC 97 10:40:57 EDT  
To: netsig@tapr.org  
Message-ID: <0000xntjxjbb.0000vfnlfph@aca.gov.au>  
Rendered body type: text/plain

Look at [www.fuller.net](http://www.fuller.net) for the new resource location.

73 Peter

From: Carol A Byers <crlybyers@garlic.com>  
Date: Sun, 21 Dec 1997 16:59:42 -0800  
To: netsig@tapr.org  
Message-ID: <349DBB7E.4871@garlic.com>  
Rendered body type: text/plain

What type of gateway list are you looking for?

73's de Carol, W9HGI

From: "(SV2AGW) George Rossopoylos" <sv2agw@the.forthnet.gr>  
Date: Tue, 23 Dec 1997 10:48:38 +0200  
To: <netsig@tapr.org>  
Message-ID: <199712230747.JAA29459@nefeli.forthnet.gr>  
Rendered body type: text/plain

Sorry i dont have any ftp site (anonymus) where i could put the files.  
Perhaps someone else near you can help you.  
I will write a new vxd for the 9600 YAM after Christmas and then i will try  
to enhance AGW Packet engine for TCP/IP. That way you will be able to use  
the ordinary wi95 internet applications for tcp/ip over packet radio.

Page 469

George Rossopoulos  
e-mail:sv2agw@the.forthet.gr  
packet:SV2AGW@SV2DXC.TSL.GRC.EU  
http://www.forthnet.gr/sv2agw/  
http://www.intranet.gr/isefi/rossopou/rossopou.htm

## 11. Nominations Sought for TAPR Board of Directors

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>  
Date: Thu, 25 Dec 1997 18:17:14 -0600  
To: "TAPR-BB list mailing" <tapr-bb@tapr.org>,  
"HF SIG list mailing" <hfsig@tapr.org>,  
"Spread Spectrum" <ss@tapr.org>, "TAPR/AMSAT DSP" <dsp@tapr.org>,  
"APRS SIG list mailing" <aprssig@tapr.org>,  
"NETSIG list mailing" <netsig@tapr.org>,  
"BBS SIG list mailing" <bbssig@tapr.org>,  
"tacgps" <tacgps@tapr.org>, "MIC-E Beta" <mic-e@tapr.org>  
Message-ID: <v03130309b0c8a625a448@[206.138.226.73]>  
Rendered body type: text/plain

Nominations Sought for TAPR Board of Directors  
(as printed in 1997 PSR #68, p. 34)

Tucson Amateur Packet Radio is incorporated in the State of Arizona as a non-profit scientific and educational institution. It is recognized by the IRS as a 501(c)3 tax-exempt organization for these same purposes. TAPR is governed by a 9-member Board of Directors. Each member of the Board serves a three year term. Every year three positions are up for election.

Board members are expected to attend two board meetings held in conjunction with the Dayton Hamvention and the ARRL and TAPR Digital Communications Conference. They participate in the decision-making process and provide guidance to the officers. They receive no pay and must defray most of their own expenses to attend meetings. Board members should be prepared to be active in the continuing Board deliberations, which are conducted via the Internet. Active participation in TAPR activities by Board members is important to the furtherance of the objectives of TAPR. The officers of TAPR are elected by the members of the Board at the annual Board of Directors meeting.

The current members of the Board of Directors and their expiration dates of their terms are:

|                         |      |                |
|-------------------------|------|----------------|
| * John Ackermann, AG9V  | 1998 | Vice President |
| * Jim Neely, WA5LHS     | 1998 | Treasurer      |
| * Barry McLarnon, VE3JF | 1998 |                |
| Steve Bible, N7HPR      | 1999 |                |
| Gary Hauge, N4CHV       | 1999 |                |
| Bob Hansen, N2GDE       | 1999 | PSR Editor     |
| Greg Jones, WD5IVD      | 2000 | President      |
| John Koster, W9DDD      | 2000 |                |
| Mel Whitten, K0PFX      | 2000 |                |

Nominations are now open for seats expiring in March 1998 (marked with an asterisk).

To place a person in nomination, please remember that he or she must be a member of TAPR. Confirm that the individual is willing to have their name placed in nomination. Send that person's name (or your own if you wish to nominate yourself) along with your call and their call, telephone numbers, mailing address, and Internet address. The person nominated should submit a short biographical sketch to be published along with the ballot.

Nominations and biographical sketches should be submitted to the TAPR office no later than December 31st, 1997.

Ballots will be mailed with the next PSR. TAPR will again use an Internet ballot, so read your ballot carefully. Results will be announced on March 30th, 1998.

Responsibilities of a board member include:

- 1) Attendance at both board meetings each year.
- 2) Regular participation with the continuous session of the board (currently held over the Internet). Typically this requires a minimum of 3 hours a week, although sometimes much more is required during active board discussions.
- 3) Participation with TAPR projects as volunteered. Board members, while

not required, are involved with various project management, ongoing organization and/or supervision/liaison positions. Active board participation with various projects make many of the most important projects and tasks possible. Board members are expected to take an active part in TAPR in some form.

All nominated members will be placed on the ballot and the highest vote receivers will be placed in the open board positions. If elected, two board meetings in 1998 will be held. One will be during Dayton Hamvention and the other during the ARRL and TAPR Digital Communications Conference. All directors shall serve for a term of three years.

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Tucson Amateur Packet Radio  
8987-309 E Tanque Verde Rd #337 \* Tucson, Az \* 85749-9399  
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e-mail: [tapr@tapr.org](mailto:tapr@tapr.org) web: <http://www.tapr.org/>  
ftp: [ftp.tapr.org](ftp://ftp.tapr.org)  
phone: 940-383-0000 fax: 940-565-2544  
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